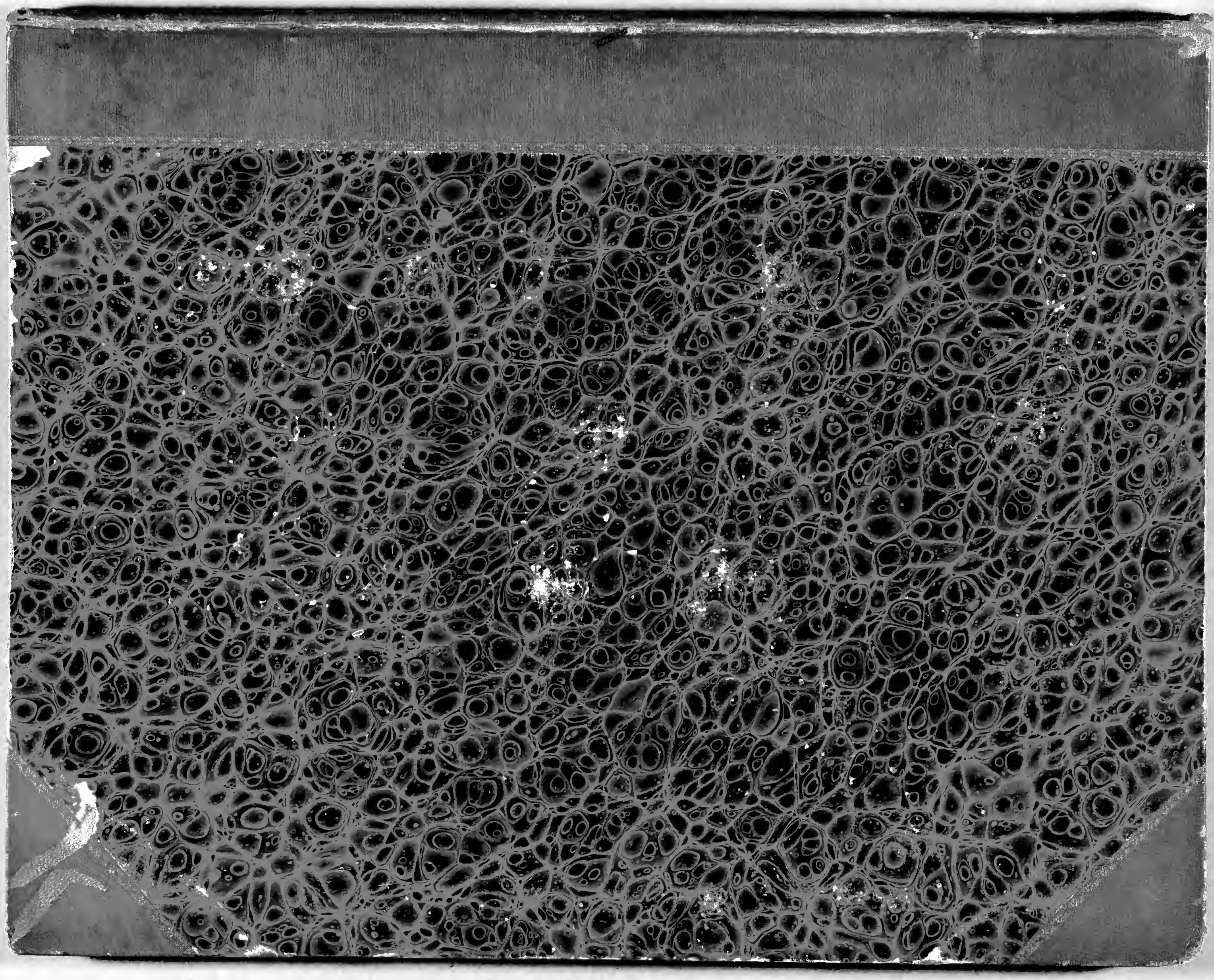

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AMERICAN

ORNITHOLOGY;

OR,

THE NATURAL HISTORY

OF

BIRDS INHABITING THE UNITED STATES,

NOT GIVEN BY WILSON.

WITH FIGURES DRAWN, ENGRAVED, AND COLOURED, FROM NATURE.

BY

CHARLES LUCIAN BONAPARTE.

VOL. I.

PHILADELPHIA:

CAREY, LEA & CAREY—CHESNUT STREET.

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T. K. & P. G. COLLINS, PRINTERS.

Sm 1825.

Eastern District of Pennsylvania, to wit:

SEAL. BE IT REMEMBERED, That on the thirteenth day of April, in the forty-ninth year of the Independence of the United States of America, A. D. 1825, SAMUEL AUGUSTUS MITCHELL, of the said District, hath deposited in this Office the title of a Book, the right whereof he claims as proprietor, in the words following, to wit:

American Ornithology; or, the Natural History of Birds Inhabiting the United States, not given by Wilson. With Figures Drawn, Engraved, and Coloured, from Nature. By Charles Lucian Bonaparte. Vol. I.

In conformity to the act of Congress of the United States, entitled "An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned." And also to the act, entitled "An act supplementary to an act, entitled 'An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned,' and extending the benefits thereof to the arts of designing, engraving, and etching, historical and other prints."

D. CALDWELL,
Clerk of the Eastern District of Pennsylvania.

PREFACE.

American Ornithology has uniformly presented a highly interesting subject of investigation to naturalists and liberally educated persons, even when the means of gratifying general curiosity were few and difficult of attainment. Wilson's invaluable work removed the obstacles preventing access to this attractive study, conferred on him an imperishable renown, improved the taste and elevated the scientific character of his fellow-citizens, and secured the approbation of the judicious and enlightened in all countries.

Placed where he could derive little or no aid from scientific books or men, Wilson's ardent and perspicacious mind triumphed over circumstances, and enabled him to exhibit the truths he discovered in that warm, lucid, and captivating language, which never fails to reach the heart of his reader, because it flowed direct from his own; whilst his clearness of arrangement, accuracy of description, and faithfulness of delineation, show, most advantageously, the soundness of his judgment and the excellence of his observation. We may add, without hesitation, that such a work as he has published in a new country, is still a desideratum in any part of Europe.

It was the inspiration derived from that pure and perennial source, the contemplation of nature, which gave Wilson the power of illustrating every object of his research, and imparting to the most abstruse discussions the charm of vigorous originality. Unfortunately for the interests of science, his eagerness to augment his stock of knowledge by more incessant application, impaired his constitution to such a degree, that he sunk under the hand of death, before his great work was completed, and before he could reap that rich harvest

of fame which has followed the appearance of his writings, wherever the English language is understood, or natural history admired.

A love for the same department of natural science, and a desire to complete the vast enterprise so far advanced by WILSON'S labours, has induced us to undertake the present work, in order to illustrate what premature death prevented him from accomplishing, as well as the discoveries subsequently made in the feathered tribes of these States. This undertaking was not precipitately decided on, nor until the author had well ascertained that no one else was willing to engage in the work. He was aware of his inability to portray the history and habits of birds in a style equal to that of his distinguished predecessor, principally because he does not write in his own language; and were his abilities equal to his wishes, the species recorded in the following pages are, for the most part, so rare, and their history so little known, as to preclude the possibility of making the attempt.

To compensate for such disadvantages, the author has throughout endeavoured to give accurate descriptions, correct synonymes, and a nomenclature as conformable to nature as possible. He has been equally solicitous to procure the best representations of his birds; in which he hopes he has succeeded, through the happy pencil of Mr. TITIAN PEALE, who has invariably drawn from the recent bird, and not from the preserved specimen; this being the principal advantage of works on Natural History, published in the country where the animals figured are found. The want of such opportunities of making drawings, causes the chief defect of various magnificent European works, in which beauty and brilliancy of colouring scarcely compensate for the unnatural stiffness, faithfully copied from stuffed skins. With the birds always before him, Mr. LAWSON has transferred our drawings to the copper with his usual unrivalled accuracy and ability. This artist, who acquired so much distinction by the engravings in WILSON'S work, has become perfectly master of his art, and so intimately acquainted with the various parts of a bird, that he may be justly styled the first ornithological engraver of our age.

That important part of the work, the colouring of the plates, has not been intrusted to inexperienced persons, but has throughout been executed from nature by Mr. A. Rider himself, whose talents as an artist are well known. The superior typographical execution is to be attributed to the extraordinary and vigilant attention of the publisher, Mr. S. A. Mitchell.

To my friends Mr. Thomas Say, and Dr. John D. Godman, my sincere thanks are due, for the care they have bestowed in preventing the introduction of foreign expressions, or phrases not idiomatic, into my composition.

No exertion will be spared which tends to the completion of a perfect Ornithology of the United States, and a journey will be undertaken towards the north, and perhaps another to the west, for the purpose of obtaining the birds of those regions.

As the birds of Florida were principally wanting, and it is even supposed that several of those belonging to Cuba, and other West India Islands, may occasionally resort to the southern part of Florida, and thus be entitled to a place in our work, a painter-naturalist was selected to visit that part of the union which Wilson had been so desirous of exploring. A better choice could not have been made than that of Mr. Titian Peale, whose zeal in the cause of natural history had previously induced him to join those useful citizens, who, under the command of that excellent officer Major Long, explored the western wilds as far as the Rocky Mountains. Mr. Peale's success in that expedition, where he procured and drew on the spot almost all the new birds contained in this volume, will warrant us in anticipating much from his exertions in Florida.

We expect that our American Ornithology will extend to three volumes, so, that with the nine previously published by Wilson, the whole subject will be embraced in twelve. The present volume contains land birds only; and in evidence of Wilson's industry we may state, that we have been unable to adduce a new Pennsylvanian bird. For the contents of this volume, we have been obliged to

resort to birds inhabiting the western territories, the greater part of which were first made known by SAY, in the Account of Long's Expedition to the Rocky Mountains, a work that has justly acquired a high degree of celebrity, and is no less creditable to the nation than to the individuals concerned in its production.

The second volume will be devoted to water birds, some of which are common in the very city of Philadelphia. The third will contain birds of both sub-classes indiscriminately, and will chiefly consist of Mr. PEALE's gleanings in Florida.

The classification and synonymes of WILSON were tolerably accurate for the time he wrote, but being far behind the present advanced state of science, correction is rendered indispensable. We shall therefore add a synopsis of all the species inhabiting the United States, arranged in orders, families, genera, and sub-genera, agreeably to the best authorities of our time, and our own impressions relative to natural affinities. In order that any one, who desires to gain a scientific acquaintance with American Ornithology, may require no other aid than what can be derived from WILSON's and the present work alone, we shall subjoin a general disquisition on birds, and a glossary of ornithological terms, which, with the synopsis, have occupied the principal portion of the author's care, and will constitute a complete work, to be published in a separate volume.

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Drawn from Nature by Wilson Peale

Engraved by A. Alexander Lawson

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AMERICAN ORNITHOLOGY.

FORK-TAILED FLYCATCHER.

MUSCICAPA SAVANA.

Plate I. Fig. 1.

Muscicapa tyrannus, Linn. *Syst.* I, p. 325, Sp. 4. Gmel. *Syst.* I, p. 931, Sp. 4. Lath. *Ind.* p. 484, Sp. 69.

Tyrannus savana, Vieill. *Ois. de l'Am. Sept.* I, p. 72, Pl. 43, (a South American specimen.) Vieill. *Nouv. Dict. d'Hist. Nat.* XXXV, p. 87.

Muscicapa tyrannus cauda bifurca, Briss. *Av.* II, p. 395, Sp. 20, Pl. 39, fig. 3.

Le Moucherolle savana, Buff. IV, p. 557, Pl. 26.

Le Tyran à queue fourchoue de Cayenne, Buff. *Pl. Enl.* 571, fig. 2.

Fork-tailed Flycatcher, Penn. *Arct. Zool.* Sp. 265. Lath. *Syn.* II, Part 1, p. 355, Sp. 59.

Philadelphia Museum, No. 6620.

Though Brisson, Linné, and Pennant have stated the Fork-tailed Flycatcher to inhabit this region, as far north as Canada, still the fact seemed more than doubtful, since this bird escaped the researches of Vieillot, and, what is more extraordinary, those of the indefatigable Wilson. It is, therefore, a very gratifying circumstance, that we are able to introduce this fine bird with certainty into the Ornithology of the United States, and, by the individual represented in the annexed plate, to remove all doubt on the subject. The specimen from which our drawing was made is a beautiful male, in full plumage; it was shot near Bridgetown, New-Jersey, at the extraordinary season of the first week in December, and

was presented by Mr. J. Woodcraft, of that town, to Mr. Titian Peale, who favoured me with the opportunity of examining it.

Brisson published the first account of this bird. That we have rejected the name given by Linné may appear contrary to our principles; but in this instance we certainly have no option, inasmuch as the same name has been very properly retained by Wilson, agreeably to Brisson, for the *Lanius tyrannus* of Linné. Had Linné himself included them both in the same genus, he would doubtless have retained that specific name for the Kingbird, which is unquestionably a *Muscicapa* and not a *Lanius*. As the Kingbird is a very abundant species, known to every zoological reader by the name of *tyrannus*, it is obvious that less inconvenience will be produced by changing the name of an almost unknown species, than would result from altering that of one with which we are so familiar. We have therefore adopted Vieillot's specific name of *savana*, taken by that author from Montbeillard, who, in Buffon's work, thereby endeavoured to commemorate this bird's habit of frequenting inundated savannas. Naturalists who separate *Tyrannus* from *Muscicapa* generically, disagree with respect to the arrangement of this species. For ourselves, we consider the former as a sub-genus of *Muscicapa*, including the larger species, among which our Fork-tailed Flycatcher must be placed.

This species is fourteen inches long, its tail measuring nearly ten; the extent from the tip of one wing to that of the other is fourteen inches. The bill is somewhat more slender and depressed at base than that of the Kingbird, and, as well as the feet, is black. The irides are brown. The upper part of the head, including the cheeks and superior origin of the neck, is velvet-black. The feathers of the crown are somewhat slender, elevated, and of a yellow-orange colour at base, constituting a fine spot, not visible when they are in a state of repose; the remaining part of the neck above and the back are grayish-ash; the rump is of a much darker grayish-ash, and gradually passes into black, which is the colour of the

superior tail coverts; the inferior surface of the body, from the base of the bill, as well as the under wing and under tail coverts, is pure white. The wings are dusky, the coverts being somewhat lighter at tip and on the exterior side; the first primary is edged with whitish on the exterior web, and is equal in length to the fourth; the second primary is longest; the three outer ones have a very extraordinary and profound sinus or notch on their inner webs, near the tip, so as to terminate in a slender process. The tail is very profoundly forked, the two exterior feathers measuring nearly ten inches in perfect individuals, whilst the two succeeding are but five inches long, and the other feathers become gradually and proportionably shorter, until those in the middle are scarcely two inches in length; the tail is, in fact, so deeply divided, that if the two exterior feathers were removed, it would still exhibit a very forked appearance. All the tail feathers are black, the exterior one each side being white on the remarkably narrow outer web, and on the shaft beneath, for nearly three-fourths of its length.

I cannot agree with those who say that the female is distinguished from the other sex by wanting the orange spot on the head, as I think we may safely conclude, from analogy, that there is hardly any difference between the sexes. The young birds are readily recognized, by being destitute of that spot, as well as by having the head cinereous, instead of black; the colour of the whole upper part of the body is also darker, the tail considerably shorter, and the exterior feathers not so much elongated as those of the adult. It is proper to remark, that the elongated tail feathers of the full grown bird are sometimes very much worn, in consequence of the rapidity with which it passes through the bushes.

Two coloured figures have been given of the Fork-tailed Flycatcher, the one by Buffon, which is extremely bad, although the rectilinear form of the tail is correctly represented; the other, by Vieillot, which has the exterior tail feathers unnaturally curved, and notwithstanding it is preferable to Buffon's figure, yet it is far

from being accurate. This author having been unable to procure a North American specimen, chose nevertheless to introduce the species in his Natural History of North American Birds, on the authority of former authors, giving a figure from a South American specimen. The error in representing the exterior tail feathers curved, doubtless arose from the manner in which the dried skin was packed for transportation. That our drawing of this graceful bird is far superior to those above mentioned, will at once be evident on comparison; this superiority is owing to the circumstance of this drawing, like all the others given in the present work, being made from the recent specimen. Buffon's plain figure is a more faithful representation than that given in his coloured engravings.

From the very great rarity of the Fork-tailed Flycatcher in this region, and the advanced season in which this individual was killed, it is evident that it must have strayed from its native country under the influence of extraordinary circumstances; and we are unable to believe that its wanderings have ever extended as far as Canada, notwithstanding the statements of authors to the contrary. It may be proper to observe, that the difference indicated by Linné and Latham between the variety which they suppose to inhabit Canada, and that of Surinam, appears to have no existence in nature.

Although this bird is so very rare and accidental here, we should be led to suppose it a more regular summer visitant of the southern states, were it not impossible to believe that so showy a bird could have escaped the observation of travellers; hence we infer, that the Fork-tailed Flycatcher must be included in the catalogue of those species which are mere fortuitous visitors to the United States. As but a single specimen of this bird has been obtained, I cannot give any account of its manners and habits from personal observation.

The native country of the Fork-tailed Flycatcher is Guiana, where it is rather common, and is improperly called *Veuve* (Widow), from the great length of its tail, in which character only it resembles the African birds of that name.

The habits of the Fork-tailed Flycatcher resemble those of other species of the same genus. It is a solitary bird, remaining for a long time perched on the limb of a tree, whence it occasionally darts after passing insects; or, flying downwards, it alights on the tufts of herbage which appear above the water, affording it a resting place in the midst of those partially inundated lands called savannas, beyond the limits of which it is not frequently seen. While on the tuft, this bird moves its tail in a manner similar to that of the Wagtails. Besides insects, the Fork-tailed Flycatcher feeds occasionally on vegetable substances, as, on dissection, the stomach of our specimen was found to be filled with Pokeberries, (*Phytolacca decandra, L.*)

Beyond these particulars we have no positive knowledge of the manners of our Flycatcher, though Vieillot has recorded a history of some length, taken from D'Azara; but the bird observed by the latter author in Paraguay and Buenos Ayres, though closely allied, appears to be specifically distinct from the one we are describing. Vieillot has since been convinced of this difference, and, in the (French) New Dictionary of Natural History, he has separated the more southern species under the name of *Tyrannus violentus.* In colour that bird strongly resembles our *Muscicapa savana,* but it is considerably smaller, and has different habits, being gregarious; whilst the *savana,* as we have already stated, is a solitary bird.

Another species, for which ours may be readily mistaken, is the *Tyrannus bellulus,* Vieill., which, however, is much larger, with a still longer tail, differing also by having a large black collar extending to each corner of the eye, margining the white throat; and the head of the same bluish-gray colour with the other superior parts of the body; the remaining under parts being of the same colour, with a narrow brown line in the middle of each feather; and by having a whitish line on each side of the head behind the eye, extending to the occiput. The *Tyrannus bellulus* is a native of Brazil.

ROCKY-MOUNTAIN ANTCATCHER.

MYIOTHERA OBSOLETA.

Plate I. Fig. 2.

Troglodytes obsoleta, Say, *in Long's Expedition to the Rocky Mountains*, vol. II, p. 4.

Philadelphia Museum, No. 2420.

This bird is one of those beings which seem created to puzzle the naturalist, and convince him that nature will never conform to his systems, however perfect his ingenuity may be capable of devising them. This will become sufficiently apparent, when we consider in what manner different authors would have arranged it.

We cannot positively decide whether Vieillot and his followers would have referred this species to *Myrmothera*, a name they have substituted for *Myiothera;* to their genus *Thryothorus*, which we unite to *Troglodytes;* or to their slender-billed section of *Tamnophilus*, rejected by us from that genus, and of which some recent authors have made a genus called *Formicivora;* yet we have very little hesitation in stating our belief, that they would have assigned its place among the species of the latter. According to our classification, it is certainly not a *Tamnophilus*, as we adopt the genus, agreeably to the characters given by Temminck, who, not admitting the genus *Troglodytes*, would undoubtedly have arranged this bird with *Myiothera*, as Illiger would also have done.

The only point, therefore, to be established by us, is whether this bird is a *Myiothera* or a *Troglodytes*. It is, in fact, a link intermediate to both. After a careful examination of its form, especially the unequal length of the mandibles, the notch of the superior mandible, and the length of the tarsus; and, after a due consideration of the little that is known relative to its habits, we

unhesitatingly place it with *Myiothera*, though in consequence of its having the bill more slender, long, and arcuated than that of any other species I have seen, it must occupy the last station in the genus, being still more closely allied to *Troglodytes*, than those species whose great affinity to that genus has been pointed out by Cuvier. This may be easily ascertained, by comparing the annexed representation with the figures given by Buffon and Temminck. The figure which our Rocky-Mountain Antcatcher resembles most, is Buffon's Pl. Enl. 823, fig. 1, (*Myiothera lineata.*) The colours of our bird are also similar to those of a Wren, but this similitude is likewise observed in other *Myiotheræ.*

The bird now before us was brought from the Arkansaw river, in the neighbourhood of the Rocky Mountains, by Major Long's exploring party, and was described by Say under the name of *Troglodytes obsoleta*, from its close resemblance to the Carolina Wren (*Troglodytes Ludovicianus*), which Wilson considered a *Certhia*, and Vieillot a *Thryothorus.*

As the Rocky-Mountain Antcatcher is the first and only species hitherto discovered in North America, we shall make some general observations on the peculiarities of a genus thus introduced into the Fauna of the United States.

Buffon first formed a distinct group of the Antcatchers under the name of *Fourmiliers*, and considered them as allied to his *Brèves*, now forming the genus *Pitta* of Vieillot, they having been previously placed in that of *Turdus.* Lacépède adopted that group as a genus, and applied to it the name of *Myrmecophaga.* Illiger added such species of the genus *Lanius* of Linné and Latham, as are destitute of prominent teeth to the bill, and gave to the genus thus constituted the name of *Myiothera;* rejecting Lacépède's designation, as already appropriated to a genus of Mammalia.

Cuvier perceived that some of the *Fourmiliers* of Buffon were true Thrushes; but he retained the remainder as *Myiotheræ*, among which he also included the *Pittæ.* Vieillot, besides the

Pittæ, removed some other species, in order to place them in his new genera ***Conopophaga*** and ***Tamnophilus***, giving the name of ***Myrmothera*** to the remaining species, with the exception of the ***Myiothera rex***, for which he formed a distinct genus, with the name of ***Grallaria***. We agree with Vieillot, in respect to the latter bird; but as regards the other species, we prefer the arrangement of Temminck, who has adopted the genus ***Myiothera*** nearly as constituted by Illiger, including some of the slender-billed ***Tamnophili*** of Vieillot, of which our ***Myiothera obsoleta*** would probably be one, as above stated.

The genus thus constituted contains numerous species, which inhabit the hottest parts of the globe; a greater number of them existing in South America than elsewhere. For the sake of convenience, several sections may be formed in this genus, founded on the characters of the bill, tail, and tarsus; but as we have only one species, it does not rest with us to make divisions, and we shall merely remark, that our ***obsoleta*** is referable to the last section, consisting of those whose bills are the most slender, elongated, and arcuated, in company with the ***Turdus lineatus*** of Gmelin.

The Antcatchers may justly be enumerated amongst the benefactors of mankind, as they dwell in regions where the ants are so numerous, large, and voracious, that without their agency, co-operating with that of the ***Myrmecophaga jubata***, and a few other ant-eating quadrupeds, the produce of the soil would inevitably be destroyed in those fertile parts of the globe. The ant-hills of South America are often more than twenty feet in diameter, and many feet in height. These wonderful edifices are thronged with two hundred fold more inhabitants, and are proportionally far more numerous, than the small ones with which we are familiar. Breeding in vast numbers, and multiplying with great celerity and profusion, the increase of these insects would soon enable them to swarm over the greatest extent of country, were not their propagation and diffusion limited by the active exertions of that

part of the animal creation, which continually subsist by their destruction.

The Antcatchers run rapidly on the ground, alighting but seldom on trees, and then on the lowest branches; they generally associate in small flocks, feed exclusively on insects, and most commonly frequent the large ant-hills before mentioned. Several different species of these birds are often observed to live in perfect harmony on the same mound, which, as it supplies an abundance of food for all, removes one of the causes of discord which is most universally operative throughout animated nature. On the same principle we might explain the comparative mildness of herbivorous animals, as well as the ferocity and solitary habits of carnivorous, and particularly of rapacious animals, which repulse all others from their society, and forbid even their own kind to approach the limits of their sanguinary domain.

The Antcatchers never soar high in the air, nor do they extend their flight to any great distance without alighting to rest, in consequence of the shortness of their wings and tail, which, in fact, seem to be seldom employed for any other purpose than to assist them in running along the ground, or in leaping from branch to branch of bushes and low trees, an exercise in which they display remarkable activity. Some species, like the Woodpeckers, climb on the trunks of trees in pursuit of insects; and, it would appear, from their restless habits and almost constant motion, that their limited excursions are entirely attributable to the want of more ample provision for flight. The Antcatchers are never found in settled districts, where their favourite insects are generally less abundant; but they live in the dense and remote parts of forests, far from the abodes of man and civilization. They also dislike open and wet countries.

The note of the Antcatchers is as various as the species are different, but it is always very remarkable and peculiar. Their flesh is oily and disagreeable to the taste; and, when the bird is

opened, a very offensive odour is diffused, from the remains of half-digested ants and other insects, contained in the stomach.

The plumage of the Antcatchers very probably undergoes considerable changes in colour. The size of the sexes is different, the female being much larger than the male. Such variations may have induced naturalists to consider many as species, that really do not exist, as such, in nature.

The nest of these birds is hemispherical, varying in magnitude according to the size of the species, composed of dried grass, rudely interwoven; it is fixed to small trees, or attached by each side to a branch, at the distance of two or three feet from the ground. The eggs are nearly round, and three or four in number.

The discovery of any species of this genus in the old world is quite recent, and it had previously been believed that the genus was peculiar to South America; and though the existence of ant-destroying birds was suspected in other tropical regions, they were supposed to be generically distinct from those of the corresponding parts of America, as was known to be the fact in the case of the ant-eating quadrupeds. This opinion was founded on the admitted axiom, that nature always varies her groups in remote tropical regions having no communication with each other. The reverse, however, is the fact in the case of the ant-catching birds, as we find perfect analogies between the species residing in those distant parts of the globe, even throughout the different sections into which the genus may be divided.

The Rocky-Mountain Antcatcher is six inches long. The bill, measured from the corner of the mouth, is more than one inch in length, being slightly curved almost from the base; it is very slender, being nearly two-eighths of an inch in diameter at the base, and only the sixteenth of an inch in the middle, whence it continues to diminish to the tip; and is of a dark horn colour, paler beneath. The feet are dusky; and the length of the tarsus is seven-eighths of an inch. The irides are dark-brown; the whole plumage above

is of a dusky-brownish, slightly undulated with pale, tinted with dull ferruginous on the top of the head and superior portions of the back. The sides of the head are dull whitish, with a broad brown line passing through the eye to the commencement of the neck. The chin, throat, and breast are whitish, each feather being marked by a longitudinal line of light-brown. The belly is white; and the flanks are slightly tinged with ferruginous. The primaries are entirely destitute of undulations or spots; the tail coverts are pale, each with four or five fuscous bands; the inferior tail coverts are white, each being bifasciate with blackish-brown. The tail is nearly two inches long, rounded, broadly tipped with ferruginous-yellow, and having a narrow black band before the tip; the remaining part of the tail is of the same colour with the wings, and is obsoletely banded, these bands being more distinct on the two middle feathers, which are destitute of the black and yellowish termination; the exterior feather is dusky at tip, marked by four yellowish-white spots on the exterior, and by two larger ones on the inner web.

The specimen of the Rocky-Mountain Antcatcher we are describing is a male, shot in the month of July, and possibly not adult; as it is the only one brought by Major Long's party, we cannot determine the extent or nature of the variations the species may undergo from age, sex, or season.

The note of this bird is peculiar, resembling the harsh voice of the Terns. It inhabits the sterile country bordering on the river Arkansaw, in the neighbourhood of the Rocky Mountains, where it is frequently observed hopping on the ground, or flitting among the branches and weather-beaten, half-reclining trunks of a species of Juniper; when it flies among the crooked limbs of this tree it spreads its tail considerably, but was never seen to climb. They were generally observed in small associations of five or six individuals, perhaps composing single families.

FEMALE GOLDEN-WINGED WARBLER.

SYLVIA CHRYSOPTERA.

Plate I. Fig. 3.

See Wilson's *American Ornithology*, II, p. 113, Pl. 15, fig. 5, for the Male.

Motacilla chrysoptera, Linn. *Syst.* I, p. 333, Sp. 20. Gmel. *Syst.* I, p. 971, Sp. 20, (Male.)
Sylvia chrysoptera, Lath. *Ind.* p. 541, Sp. 123. Vieill. *Ois. de l'Am. Sept.* II, p. 37, Pl. 97, (Male.)
Motacilla flavifrons, Gmel. *Syst.* I, p. 976, Sp. 126, (Male.)
Sylvia flavifrons, Lath. *Ind.* p. 527, Sp. 69, (Male.)
Ficedula Pensylvanica cinerea gutture nigro, Brisson, *Av.* Suppl. p. 109, Sp. 80, (Male.)
Figuier aux ailes dorées, Buff. *Ois.* V, p. 311, (Male.)
Golden-winged Flycatcher, Edwards, *Glean.* II, 189, Pl. 299, (Male.)
Gold-winged Warbler, Penn. *Arct. Zool.* Sp. 295. Lath. *Syn.* II, Part II, p. 492, Sp. 118, (Male.)
Yellow-fronted Warbler, Penn. *Arct. Zool.* Sp. 296. Lath. *Syn.* II, Part II, p. 461, Sp. 67, (Male.)
Parus alis aureis, the Golden-winged Flycatcher, Bartram, *Trav.* p. 292, (Male.)

Philadelphia Museum, No. 7010, Male; No. 7011, Female.

The female of this pretty little Warbler, hitherto unknown to any naturalist, is now figured and described for the first time. For the opportunity of presenting it to the reader, we are indebted to Mr. Titian Peale, who shot it on the twenty-fourth of May, near Camden, New-Jersey; and, with his usual kindness, and zeal for Natural History, communicated it to us for this work.

This little Warbler differs so materially from its mate, as to require a distinct figure and description, in order to be recognized; yet we cannot fail to perceive a kind of family resemblance between the sexes; and, by comparing the two descriptions and accompanying figures, our readers will agree with us that they are but one

and the same species, in a different garniture of plumage. The distribution of markings is really similar in both sexes; but in the female the colours are paler, and green prevails on those parts which, in the male, are of a dark slate-colour.

The female of the Golden-winged Warbler is four and a half inches long. The bill is blackish, straight, entire, rounded, and gradually tapering to a sharp point. The feet are brownish-ash; the irides dark-brown. The front is golden-yellow, the top of the head bright olive-yellow; the back of the head, and superior parts of the neck and body, are of a pale plumbeous hue, the feathers being tipped with yellow-olive, more particularly on the rump; the superior tail coverts are pure pale plumbeous. A wide slate-coloured stripe passes through the eye from the bill and dilates on the cheeks; this is margined by a white line above the eye, and by a wider one on each side of the throat. The throat is of a pale slate-colour, becoming still paler on the breast. The remaining under parts are whitish, occasionally tinged with yellow, and with slate-colour on the flanks. The wings are of the same colour as the back, but somewhat darker, and are crossed by two wide bands of bright yellow, formed by the tips of the first and second rows of wing coverts. The primaries are dusky, margined on the exterior web with pale, and on the inner broadly with white. The secondaries are broadly margined with yellow-olive on the outer web, and with white on the inner web. The tail is nearly even at tip, of a dusky plumbeous colour; the three lateral feathers have a large pure white spot on the inner web.

This last essential character also exists in the male, though Wilson has not mentioned it. As to the manners and habits of the species, he has given us no information, except that it is rare, and remains only a few days in Pennsylvania. He says nothing of the female, and Vieillot never saw it.

We regret that we are unacquainted with the form of its nest, and the peculiarity of its song. We can only state, that during

its short stay in Pennsylvania, it is solitary and silent, gleaning amongst the branches of trees, and creeping much after the manner of the Titmouse, with its head frequently downwards, in pursuit of larvæ and insects, which constitute exclusively the food of this species.

Wilson was impressed with the opinion that the shape of the bill would justify the formation of a distinct sub-genus, which would include this bird, the *Sylvia vermivora*, and some other species. In this opinion Cuvier has coincided, by forming his sub-genus *Dacnis*, which he places under his extensive genus *Cassicus*, remarking that they form the passage to *Motacilla*. This sub-genus we shall adopt, but we differ from Cuvier by arranging it under *Sylvia;* it will then form the transition to the more slender-billed *Icteri*. Temminck and Vieillot have arranged them also under *Sylvia;* the latter author, in the (French) New Dictionary of Natural History, gives them the name of Pitpits; and it is most probably from want of examination, that he has not considered the present bird as belonging to that section.

Drawn from Nature by William R. Dale.

Engraved by Alexander Lawson.

1. Swallow tailed Flycatcher. *Muscicapa Forficata.*

2. Arkansaw Flycatcher. *Muscicapa Verticalis.*

3. Say's Flycatcher. *Muscicapa Saya.*

4. Female Golden crested Wren. *Regulus Cristatus.*

SWALLOW-TAILED FLYCATCHER.

MUSCICAPA FORFICATA.

Plate II. Fig. 1.

Muscicapa forficata, Gmel. *Syst.* I, p. 931, Sp. 22. Lath. *Ind.* p. 485, Sp. 70. Vieill. *Ois. de l'Am. Sept.* I, p. 71. Stephens, *Cont. of* Shaw's *Zool.* XX, p. 413, Pl. 3.
Tyrannus forficatus, Say, *in Long's Expedition to the Rocky Mountains*, II, p. 224.
Moucherolle à queue fourchue du Mexique, Buff. *Ois.* IV, p. 564.
Gobe-mouche à queue fourchue du Mexique, Buff. Pl. Enl. 677.
Swallow-tailed Flycatcher, Lath. *Syn.* II, Part I, p. 356, Sp. 60.

Philadelphia Museum, No. 6623.

This rare and beautiful bird is, I believe, now figured from nature for the second time; and, as the plate given by Buffon conveys but an imperfect idea of its characters, the representation in the accompanying engraving will certainly prove the more acceptable to naturalists. That author had the merit of publishing the first account of this species; and the individual he described, was received from that part of Louisiana which borders on Mexico. Neither Latham, Gmelin, nor Vieillot, seem to have had an opportunity of examining this bird, as they have evidently drawn on Buffon for what they have said relative to it. Hence it appears, that the Swallow-tailed Flycatcher has never been obtained from the time of Buffon to the period of Major Long's expedition to the unexplored region it inhabits. The specimen before us, which is a fine adult male, was shot by Mr. Titian Peale, on the twenty-fourth of August, on the Canadian fork of the Arkansaw river.

Although this bird is very different from the Fork-tailed Flycatcher, yet on account of the form of the tail, and the similarity of the common name, they are apt to be mistaken for each other;

and, when both are immature, some caution is required to avoid referring them to the same species. Notwithstanding this similarity, some authors have placed the Fork-tailed Flycatcher in their genus *Tyrannus,* and the present bird in *Muscicapa;* whereas, from an inspection of the bills, it will at once be seen, that the latter would be still more properly placed in their genus *Tyrannus,* as the form of its bill is exactly the same with that of the King-bird, the type of the sub-genus.

The Swallow-tailed Flycatcher, when in full plumage, is eleven inches long. The bill and feet are blackish; the irides are brown (red according to authors). The upper part of the head and neck is of a light gray; the back and scapulars are dark cinereous, tinged with reddish-brown; the rump is of the same colour, but strongly tinged with black, and the superior tail coverts are deep black; the under part of the body is milk-white, the flanks being tinged with red; the inferior tail coverts are pale rosaceous; the wings are brownish-black; the upper coverts and secondaries being margined externally, and at tip, with dull whitish; the under wing coverts are whitish rosaceous; the axillary feathers, above and beneath, are of a vivid scarlet colour. The tail is greatly elongated and excessively forked; it is of a deep velvet-black colour, each feather having the terminal margin of a dull whitish tint, and the shafts white at their bases. The three exterior feathers on each side, are of a delicate pale rosaceous colour, on a considerable part of their length from the base. The external one is five inches and a half long; the second and third gradually decrease in length, but the fourth is disproportionately shorter, and from this feather there is again a gradual decrease to the sixth, which is little more than two inches long.

The female of the Swallow-tailed Flycatcher is probably very similar to the male; but the colours of the young bird are much less vivid, and the exterior tail feathers are much shorter than those of the adult.

The Swallow-tailed Flycatcher is as audacious as the Kingbird, attacking with unhesitating intrepidity, and turning the flight of the most powerful of the feathered tribe. Its note consists of a chirping, sounding like *tsch, tsch,* much resembling that of the Prairie Dog (*Arctomys ludoviciana,* Ord), by which it deceived the members of Long's party into a belief that they were approaching one of the villages of this animal.

"A note, like that of the Prairie Dog, (writes Say,) for a moment induced the belief that a village of the Marmot was near; but we were soon undeceived, by the appearance of the beautiful *Tyrannus forficatus,* in full pursuit of a Crow. Not at first view recognising the bird, the fine elongated tail plumes occasionally diverging in a furcate manner, and again closing together, to give direction to the aerial evolutions of the bird, seemed like extraneous processes of dried grass, or twigs of a tree, adventitiously attached to the tail, and influenced by currents of wind. The feathered warrior flew forward to a tree, whence, at our too near approach, he descended to the earth, at a little distance, continuing at intervals his chirping note. This bird seems to be rather rare in this region; and, as the very powder within the barrels of our guns was wet, we were obliged to content ourselves with only a distant view of it."

The range of the Swallow-tailed Flycatcher appears to be limited to the trans-Mississippian territories, lying on the south-western frontier of the United States, more especially frequenting the scanty forests, which, with many partial, and often total interruptions, extend along the Arkansaw, Canadian, and Platte rivers, where, in some districts, they do not seem to be very uncommon.

ARKANSAW FLYCATCHER.

MUSCICAPA VERTICALIS.

Plate II. Fig. 2.

Tyrannus verticalis, Say, *in Long's Expedition to the Rocky Mountains*, II, p. 60.

Philadelphia Museum, No. 6624.

This bird, brought from the Rocky Mountains by Major Long's exploring party, is so closely allied to many imperfectly described species of the extensive genus to which it belongs, that ornithologists, at first sight, may very reasonably doubt its pretensions to rank as a new species. But, notwithstanding any doubt that may be produced by its similarity to others, it is certainly an addition to the already numerous catalogue of Flycatchers.

The total length of the Arkansaw Flycatcher is eight inches. The bill is similar to that of the Crested Flycatcher, but is more rounded above, and more abruptly inflected at tip, being of a blackish colour, as well as the feet. The head above, and nucha, are pure pale plumbeous; the crown has a restricted bright orange spot in the middle, invisible when the feathers are at rest; there is a dusky spot between the bill and eyes. The cervix and back are pale pumbeous, tinged with olivaceous, and deepening on the rump almost to blackish, which is the colour of the superior tail coverts. The chin is whitish; the throat and upper part of the breast are of the same colour as the head, but paler; the remaining under surface, including the inferior wing and tail coverts, is yellow. The wings are brown, the secondaries being margined exteriorly with whitish; the inner webs of the primaries are whitish towards the base, and near the tips they are narrowed; the first is remarkably so, being almost falciform. The tail is of a deep brown-black

colour, and very slightly emarginated; the exterior feather is white on the outer web, the shaft being white on the exterior half, and brown on the interior.

Say first described and named this bird in the second volume of the work above quoted; and he remarks that it is allied to the *Tyrannus griseus* and *Tyrannus sulphuratus* of Vieillot. There are many species for which the Arkansaw Flycatcher might more readily be mistaken; of these, we may mention the Crested Flycatcher (*Muscicapa crinita*), so well described and figured by Wilson in his second volume; and particularly the *Muscicapa ferox** of Gmelin, a South American bird, the description of which agrees so well with the species we are now considering, that it might be equally applied to either. Our bird differs from the two latter by that striking character, the white exterior web of the outer tail feather. From the *crinita* it may, more especially, be known by the spot on the crown, which does not exist in that species; by not having the tail and wing feathers rufous in any part; and by having the primaries narrowed at tip, while the *crinita* has them quite large, entire, and rounded. On a particular comparison with the *ferox*, we shall perceive that the bill of that bird is flattened, broad, and carinate, whilst in the *verticalis* it is almost rounded above. The general colour of the latter is, besides, much paler, and the tail is less deeply emarginated.

The Arkansaw Flycatcher appears to inhabit all the region extending west of the Missouri river. The specimen we have been describing is a male, killed in the beginning of July, on the river Platte, a few days march from the mountains.

* This bird had been incorrectly considered by Vieillot, in his Natural History of North American Birds, as identical with the *Muscicapa crinita;* but, afterwards perceiving it to be a distinct species, he named it *Tyrannus ferox*. A specimen is in the Philadelphia Museum, designated by the fanciful name of Ruby-crowned Flycatcher, (with this Say compared his *Tyrannus verticalis*, before he stated it to be new,) and, in the New-York Museum, three specimens are exhibited, with the erroneous title of Whiskered Flycatcher (*Muscicapa barbata*).

SAY'S FLYCATCHER.

MUSCICAPA SAYA.

Plate II. Fig. 3.

Philadelphia Museum, No. 6831.

We now introduce into the Fauna of the United States a species which is either a non-descript, or one that has been improperly named; and I dedicate it to my friend Thomas Say, a naturalist, of whom America may justly be proud, and whose talents and knowledge are only equalled by his modesty. The specimen now before us is a male, shot by Mr. T. Peale, on the seventeenth of July, near the Arkansaw river, about twenty miles from the Rocky Mountains.

We cannot be perfectly sure that this Flycatcher has not heretofore been noticed, since we find in the books, two short and unessential descriptions which might be supposed to indicate it. One of these is the *Muscicapa obscura* of Latham, (Dusky Flycatcher of his Synopsis,) from the Sandwich Islands; but, besides the difference of the tail feathers, described as acute in that bird, the locality decides against its identity with ours. The other description is that of a bird from Cayenne, the *Muscicapa obscura* of Vieillot,* given by that author as very distinct from Latham's, although he has applied the same name to it, no doubt inadvertently. This may possibly be our bird; but, even in this case, the name we have chosen will necessarily be retained, as that of *obscura* attaches to Latham's species by the right of priority.

This Flycatcher strongly resembles the common Pewee (*Muscicapa fusca*), but differs from that familiar bird by the very remarkable form of the bill; by the colour of the plumage, which

* Nouv. Dict. d'Hist. Nat. XXI, p. 451.

verges above on cinnamon-brown instead of greenish, and beneath is cinereous and rufous instead of yellowish-ochreous; and by the proportional length of the primary feathers, the first being longer than the sixth in our bird, whereas it is shorter in the Pewee.

The total length of Say's Flycatcher is seven inches. The bill is long, straight, and remarkably flattened; the upper mandible is blackish, and but very slightly emarginated; the lower mandible is much dilated, and pale horn colour on the disk. The feet are blackish; the irides are brown. The general colour of the whole upper parts is dull cinnamon-brown, darker on the head; the plumage at base is of a lead colour. The throat and breast are of the same dull cinnamon tint, gradually passing into pale rufous towards the belly, which is entirely of the latter colour; the under wing coverts are white, slightly tinged with rufous. The primaries are dusky, tinged with cinnamon, and having brown shafts; they are considerably paler beneath. The first primary is a quarter of an inch shorter than the second, which is nearly as long as the third; the third is longest; the fourth and fifth gradually decrease, and the sixth is decidedly shorter than the first. The tail is hardly emarginated, and of a blackish-brown colour.

We know nothing of the habits of this Flycatcher, except what has been communicated by Mr. T. Peale, from his manuscript notes. The bird had a nest in July, the time when it was obtained; its voice is somewhat different from that of the Pewee, and first called attention to its nest, which was built on a tree, and consisted chiefly of moss and clay, with a few blades of dried grass occasionally interwoven. The young birds were, at that season, just ready to fly.

FEMALE GOLDEN-CROWNED GOLD-CREST.

REGULUS CRISTATUS.

Plate II. Fig. 4.

See Wilson's *American Ornithology*, I, p. 126, Pl. 8, fig. 2, for the Male.

Motacilla regulus, Linn. *Syst.* I, p. 338, Sp. 48. Gmel. *Syst.* I, p. 995, Sp. 48.
Sylvia regulus, Lath. *Ind.* p. 548, Sp. 152. Temm. *Man. d'Orn.* p. 229. Ranzani, *Elem. di Zool.* III, Part V, p. 105, Pl. 16, fig. 3.
Regulus cristatus, Ray, *Syn.* p. 79, Sp. 9. Aldr. *Orn.* II, p. 649. Will. *Orn.* p. 163, Pl. 42. Vieill. *Nouv. Dict. d'Hist. Nat.* XXIX, p. 420.
Regulus vulgaris, Stephens, *Cont. of* Shaw's *Zool.* XX, p. 758, Pl. 59.
Parus calendula, Regulus cristatus vulgo Dicta, Briss. *Av.* III, p. 579, Sp. 17.
Le Roitelet, Gerardin, *Tabl. Elem. d'Orn.* I, p. 318, Sp. 26, Pl. 15, (not of Buff. *Ois.* V, p. 363, Pl. 16, fig. 2, nor Pl. Enl. 651, fig. 3, which represent *Sylvia ignicapilla* of Brehm.)
Regolo, Storia degli uccelli, IV, Pl. 390.
Gold-crested Wren, Lath. *Syn.* II, Part II, p. 508, Sp. 145. Penn. *Brit. Zool.* Sp. 153. Penn. *Arct. Zool.* Sp. 321.
Golden-crowned Wren, Edw. *Glean.* V, p. 95, Pl. 254, lower fig. Male.

Philadelphia Museum, No. 7246, Male; No. 7247, Female.

Two distinct species of Gold-crest have been, until lately, considered by naturalists as but one. Are they both inhabitants of this continent; and, if not, which is the American species? These questions cannot be readily answered, since we have nothing better than negative evidence to offer relative to the first. The present female, however, is decisive as to which of them inhabits this country, and we have therefore concluded, that the faithful representation in the accompanying plate will be acceptable to ornithologists. A slight inspection of this specimen leaves no doubt as to its being the female of the ***Regulus cristatus;*** and, should the ***Regulus ignica-***

pillus, contrary to our expectations, also prove to be an inhabitant of this country, it will appear, along with its mate, in another volume of this work. All the ornithologists state, that the latter is a native of this continent, whilst they take no notice whatever of the *Regulus cristatus*, which, if not the only indigenous, is certainly the more common species. This error seems to have originated with Vieillot, who, considering the two species as but one, probably was not careful in selecting the individual from which his drawing was made; he may, therefore, have chosen an European bird, and unluckily of the other species, as both are found in Europe.

However this may be, his figure is certainly that of the *ignicapillus;* and, it is equally obvious, that his short description of the female can only apply to the female of the *cristatus*, which corroborates my opinion. In the (French) New Dictionary of Natural History, Vieillot distinguishes two varieties of *Regulus cristatus*, and again describes the *ignicapillus* as the one he saw in America. If this observation could be relied upon, we should admit that both species are inhabitants of this country, although the present, which must be by far the most numerous, is certainly not the *ignicapillus*.

I agree with Ray, Vieillot, and other authors, and dissent from Linné, Latham, Wilson, and Temminck, respecting the propriety of placing these birds in a separate genus from *Sylvia*, and I have therefore changed the generic name adopted by Wilson. This genus forms a link intermediate to the genera *Sylvia* and *Parus*. It is small both in the number and size of its species, consisting of the two smallest of the European birds, one of which is the subject of this article; an American species, the Ruby-crowned Gold-crest (*Regulus calendulus*), so well figured and described by Wilson; and a fourth from Asia.

The most obvious characters that distinguish the genus *Regulus* from *Sylvia* are, the bill remarkably slender throughout, and two small decomposed feathers, directed forwards so as to cover the nostrils.

The habits of the Gold-crests resemble, in many respects, those of the Titmouse. They delight in cold weather, and then often perch on evergreen trees. They display great activity and agility in search of their food, being almost constantly in motion, hopping from branch to branch, or climbing on trees, frequently with the head downwards, searching the chinks of the bark for their prey. These little birds commonly feed on the smallest insects, which they catch adroitly while on the wing; in the winter they seek them in their retreats, where they lie torpid or dead. They are also very expert at finding larvæ and all sorts of small worms, of which they are so fond as to gorge themselves exceedingly. During summer, they occasionally eat little berries and small grains. In autumn they are fat, and fit for the table, notwithstanding their very diminutive size. The species we are describing is found in great quantities in the neighbourhood of Nuremberg, in Germany, and sold in the markets of that city, where they command a high price.

Wilson, in his account of the present species, observes, that "the very accurate description given by the Count de Buffon, agrees, in every respect, with ours." Notwithstanding this observation, Buffon's plate and description designate the *ignicapillus* beyond the possibility of doubt; whilst those of Wilson are intended for the *cristatus*.

This statement of Wilson, joined to the testimony of Vieillot, would have led us to believe the *ignicapillus* to be an American bird, if Wilson's plate, and more especially his description, as well as the inspection of the very individual he delineated, and a hundred others, had not confirmed our own belief. It may, however, be considered extraordinary, that so diminutive a being should extend its range so widely as to participate equally in the bounties of two continents; and that another, so closely allied to it as to be generally mistaken for a mere variety, should be limited in its wanderings by the boundaries of but one.

That the reader may be assured of the specific difference between these two birds, I add a short comparative description. The ***Regulus cristatus*** has the bill very feeble, and quite subulate; whilst that of the *ignicapillus* is also subulate, but is wider at base. The cheeks of the former are pure cinereous, without any white lines, having only a single blackish one through the eye; those of the latter, in addition to the black line through the eye, have a pure white one above, and another below, whence Temminck calls it ***Roitelet triple bandeau.*** The English name also may be derived from this character, or the bird may rather be called Fire-crowned Gold-crest, from its Latin name. The crest of the male Golden-crowned Gold-crest is yellowish-orange, that of the Fire-crowned is of the most vivid orange; but, the most obvious difference is between the females, that of the Golden-crowned having a lemon-yellow crest, which, in the female of its congener, is orange, like that of the male, only much less vivid. The cheek bands of the female Fire-crowned are by no means so obvious as in its mate; thus the female of this species resembles the male Golden-crowned, than which the colours of its crest are not less brilliant. If, to these traits, we add, that the latter is a little larger, we shall complete the enumeration of their differences.

The two species are also somewhat distinguished by their manner of living. The Golden-crowned Gold-crest associates in small bands, consisting of a whole family, whilst the Fire-crowned is only observed in pairs. The latter is more shy, and frequents the tops of the highest trees, whereas the former is more generally observed amongst low branches and bushes; the voice of the Fire-crowned Gold-crest is also stronger. Their nests, however, are both of the same admirable construction, having the entrance on the upper part; but the eggs are different in colour, and those of the Fire-crowned are fewer in number.

The female Golden-crowned Gold-crest is three inches and three quarters long, and six in extent. The bill is black; the feet dusky;

the toes and nails wax colour; the irides are dark brown. The frontlet is dull whitish-gray, extending in a line over and beyond the eye; above this is a wide black line, confluent on the front, enclosing on the crown a wide longitudinal space of lemon-yellow, erectile, slender feathers, with disunited webs; a dusky line passes through the eye, beneath which is a cinereous line, margined below by a narrow dusky one. The cervix and upper part of the body are dull olive-green, tinged with yellowish on the rump. The whole inferior surface is whitish; the feathers, like those of the superior surface, being blackish-plumbeous at base. The lesser and middling wing coverts are dusky, margined with olive-green, and tipped with whitish; the greater coverts are dusky, the outer ones immaculate, the inner ones have white tips, which form a band on the wings. The inferior wing-coverts, and all the under surface of the wings, are more or less whitish-gray; the primaries are dusky, with a narrow greenish-yellow outer margin, wider at base, and attenuated to the tip, where it is obsolete. The secondaries are dusky; on the outer web they are whitish near the base, then black, then with a greenish-yellow margin extending nearly to the tip; the margin of the inner web is white; the secondaries nearest to the body are, moreover, whitish on the terminal margin. The tail is emarginated; the feathers are dusky olive-green on the margin of the outer web; the inner margins, with the exception of the two middle ones, are whitish.

Until their first moult, the young of both sexes are much like the adult female, except in being destitute of the yellow spot on the crest, which is greenish-olive. In this state, however, they are not seen here, as they breed farther to the north, and moult before their arrival in the autumn.

1. *Yellow-headed Blackbird.*
Icterus Icterocephalus.

2. *Female.*

3. *Female Cape May Warbler.*
Sylvia Maritima.

YELLOW-HEADED TROOPIAL.

ICTERUS ICTEROCEPHALUS.

Plate III. Fig. 1, Male; 2, Female.

Oriolus Icterocephalus, Linn. *Syst.* I, p. 163, Sp. 16. Gmel. *Syst.* I, p. 392, Sp. 16. Lath. *Ind.* p. 183, Sp. 32, Male.

Icterus Icterocephalus, Daudin, *Orn.* II, p. 337, Sp. 9, Male.

Pendulinus Icterocephalus, Vieill. *Nouv. Dict. d'Hist. Nat.* V, p. 317, Male.

Icterus Xanthornus Icterocephalus Cayanensis, Briss. *Av.* II, p. 124, Sp. 27, Pl. 12, fig. 4, Male.

Cornix atra; capite, collo, pectoreque flavis, Koelreuter, *Nov. Comm. Ac. Sc. Petrop.* XI, p. 435, Pl. 15, fig. 7, Male.

Les Coiffes jaunes, Buff. *Ois.* III, p. 250, Male.

Carouge de Cayenne, Buff. Pl. Enl. 343, Male.

Yellow-headed Starling, Edwards, *Glean.* III, p. 241, Pl. 323, Male.

Yellow-headed Oriole, Lath. *Syn.* I, Part II, p. 441, Sp. 30, Male.

Philadelphia Museum, No. 1528, Male; No. 1529, Female.

Although this species has long been known to naturalists as an inhabitant of South America, and its name introduced into all their works, yet they have given us no other information concerning it than that it is black, with a yellow head and neck. It was added to the Fauna of the United States by the expedition of Major Long to the Rocky Mountains.

The female has been hitherto entirely unknown, and all the figures yet given of the male being extremely imperfect, from the circumstance of their having been drawn from wretchedly stuffed specimens, we may safely state, that this sex also is, for the first time, represented with a due degree of accuracy in our plate. The figures published by Edwards and Buffon approach the nearest to the real magnitude; but they are mere masses of black, surmounted

by a yellow cap; those of Brisson and others, are considerably smaller.

As that striking character, the white spot on the wing, is neither indicated in the figure nor description of any author, we might have been induced to believe that our species is different from the South American, if a close comparison of the two had not proved their identity. Another circumstance might have been equally deceptive: Brisson, who gave the first account of this bird, from a Cayenne specimen sent to Réaumur's Museum, and who seems to have been copied by all subsequent authors, states its length to be less than seven inches, a size considerably inferior to that of the living bird. Had this admeasurement been taken from a recent specimen, we could hardly hesitate to believe our bird distinct; but as he had only a dried skin, and as Buffon's figure represents a nearer approach to the size of nature, we conclude that Brisson's estimate is not to be implicitly relied upon. Vieillot, who never saw the bird, states the length to be six inches and a half, and refers it to his genus *Pendulinus*, but it certainly belongs to his genus *Agelaius*.

The male Yellow-headed Troopial is ten inches and a half long. The bill is dark horn colour, and formed exactly like that of the Red-winged Troopial. The feet are black; the irides dark brown. The whole head, neck, and breast, are brilliant orange-yellow, more vivid and sericeous on the head, and terminating in a point on the belly; the feathers around the base of the bill, the chin, and a wide stripe passing from the bill through the eye, are black. The remaining parts, excepting some feathers of the belly, and some of the under tail coverts, which are yellow at base, are glossy black, very slightly tinged with brownish. Some of the exterior wing coverts are pure white with black tips, constituting two very remarkable white spots on the wing, the larger of which is formed by the greater coverts of the primaries, and the smaller one by the middling coverts. The first, second, and third primaries, are

longest and equal. The tail is four inches long, slightly rounded, the two middle feathers being somewhat shorter than those immediately adjoining. This character Wilson remarked in the Red-winged Troopial; and, as other notable traits are common to both species, we must regard them, not only as congeneric, but as very closely allied species of the same sub-genus. They differ, however, in colour, and the Yellow-headed Troopial is larger, having the bill, feet, and claws consequently stronger, and the first primary longer than the second and third, or at least as long; whereas, in the Red-winged, the third is the longest.

The female of our Troopial is eight inches and a quarter long, a size remarkably inferior to that of the male, and exactly corresponding with the difference existing between the sexes of the Red-winged Troopial. The bill and feet are proportionally smaller than those of the male, the feet being blackish; the irides are dark brown. The general colour is uniform dark brown, a shade lighter on the margin of each feather. The frontlet is grayish-ferruginous, as well as a line over the eye confluent on the auricles with a broad line of the same colour passing beneath the eye, including a blackish space varied with grayish. An abbreviated blackish line proceeds from each side of the lower mandible; the chin and throat are whitish; on the breast is a large rounded patch, of a pretty vivid yellow, occupying nearly all its surface, and extending a little on the neck. On the lower part of the breast, and beginning of the belly, the feathers are skirted with white. The form of the wings and tail is the same as in the male; the wings are immaculate.

The young of this species are very similar to the female, the young male gradually changing to the rich adult covering.

The Yellow-headed Troopials assemble in dense flocks, which, in all their varied movements and evolutions, present appearances similar to those of the Red-winged, which have been so well described by Wilson. They are much on the ground, like the Cow Troopial, (Cow Bunting of Wilson); on dissection, their stomachs

have been found filled with fragments of small insects, which seem to constitute their chief food, though doubtless they also feed on vegetable substances. Their notes resemble those of the Red-winged Troopial, but are more musical. The range of the Yellow-headed Troopial is very extensive, as it is found from Cayenne to the river Missouri; although it passes far north in the western region, yet it does not visit the settled parts of the United States.

The fine specimens represented in our plate were killed near the Pawnee villages, on the river Platte, where they were seen in great numbers about the middle of May. The males and females were sometimes observed in separate flocks.

We adopt the genus *Icterus*, nearly as it was established by Brisson, and accepted by Daudin and Temminck. Authors have variously estimated this genus both in regard to its denomination and limits. One of Wilson's most important nomenclatural errors, consisted in placing one of the species under the genus *Sturnus*, with which it has but little similarity, if we except some of its habits, and particularly its gregarious disposition. Linné considered these birds as *Orioli*, in which he was followed by Gmelin and Latham, notwithstanding the remarkable difference existing between them and the *Oriolus galbula* of Europe, the type of that genus. Illiger, and some other naturalists, considering that bird a *Coracias*, appropriated the name of *Oriolus* to our *Icterus*, and separated from it the largest species, which he called *Cassici*. Linné had declared all generic names previously given to arts, diseases, &c. to be inadmissible in natural history; Illiger, on that principle, altogether rejected the name *Icterus*, as being pre-occupied by a disease. This may account for the introduction of new names for genera, one of which at least ought to have retained its first appellation. Vieillot, however, would have caused less confusion, if he had adopted the name of *Icterus*, (which, with *Saxicola*, and all other names of that class, we do not think objectionable,) instead of *Agelaius*, *Pendulinus*, or *Yphantes*, three of his

four genera corresponding to our *Icterus*. But, if the latter name was considered as utterly inadmissible, we see no reason why he did not accept that of *Xanthornus*, applied to this genus by Pallas.

All the species of Troopial are peculiar to America. We divide them into four sub-genera, the present bird belonging to the second, to which we apply the name of *Xanthornus*. The species of this sub-genus are peculiarly social in their dispositions, and their associations are not liable to interruption from the influence of love itself. Not only do many individuals of the same family combine and labour in concert, but they also unite with very different species. Their aspect is animated, and their movements are quick, bold, and vigorous; they fly rapidly, at a good height, and are much attached to the places of their birth. Their song is a kind of whistling; they walk with the body nearly erect, with a slightly hurried step, and are seen sitting on the ground, or perched on the branches of trees. They seek no concealment, and never enter the woods, though they are very careful to construct their nests in a safe situation. The Troopials eat no fruits, but derive their subsistence from insects, worms, grains, and small seeds. They leave the temperate climates at the approach of winter, and are amongst the first birds of passage that return with the spring.

FEMALE CAPE-MAY WARBLER.

SYLVIA MARITIMA.

Plate III. Fig. 3.

See WILSON's *American Ornithology*, VI, p. 99, Pl. 54, fig. 3, for the Male.

My Collection.

I WAS so fortunate as to obtain this undescribed little Warbler in a small wood near Bordentown, New-Jersey, on the fourteenth of May, at which season ornithologists would do well to be on the alert to detect the passenger Warblers, whose stay in this vicinity is frequently limited to a very few days.

Judging by the analogical rules of our science, this bird is no other than the female of Wilson's Cape-May Warbler. Its appearance is so different from the male he described, that the specific identity is not recognised at first sight; but, by carefully comparing the two specimens, a correspondence in the least variable characters may readily be perceived, especially in the remarkable slenderness of the bill, which distinguishes the Cape-May, from all other resembling species of North American Warblers.

Wilson has given no information relative to the history and habits of this species, having never procured more than a male specimen; and we have equally to regret, that, having obtained but a single female, we are unable to supply the deficiency, even in regard to its song.

The female Cape-May Warbler is four inches and three quarters long, and more than eight in extent. The bill is slender, delicate, and slightly curved, being black, as well as the feet. The irides are dark brown; the upper part of the head olive-cinereous, each

feather having a small blackish spot on the middle. A yellow line extends from the bill over the eye, and is prolonged in an obsolete trace around the auditory region, thence returning to the corner of the mouth. A blackish line passes through the eye which is circumscribed by a whitish circle; the cheeks are dull cinereous, with very small pale spots; the upper parts of the neck and of the body are olive-cinereous, tinged with more cinereous on the neck, and with yellow-olive on the rump. The chin is whitish; the throat, breast, and flanks are whitish, slightly tinged with yellowish, each feather having a blackish spot on the middle; the belly is immaculate; the vent and inferior tail coverts are shaded in the middle of each feather with dusky. The smaller wing coverts are dull olive-green, blackish in the centre; the middling wing coverts are black, margined exteriorly, and tipped with pure white; the greater wing coverts are blackish, margined with olive-white; the primaries are dusky, finely edged with bright olive-green on the exterior web, obsolete on that of the first primary, which is of the same length as the fourth; the second and third are longest, and but little longer than the fourth. The tail is slightly emarginated, the feathers being dusky, edged with bright olive-green on the exterior side, and with white on the interior; the two or three exterior feathers on each side have a pure white spot on their inner webs near the tip.

The female Cape-May Warbler may be very easily mistaken for an imperfect *Sylvia coronata*, of which four or five nominal species have already been made. The striking resemblance it bears to the young, and to the autumnal condition of the plumage in that species, requires a few comparative observations to prevent their being confounded together.

The present bird is smaller than the *coronata*, with a more slender, and rather more elongated bill; it is altogether destitute of the yellow spot on the head, as well as of the yellow on the

rump, which is a striking character of the *coronata* in all its states, and gives rise to the English name adopted by Wilson.

The colour of the outer edging of the wing and tail feathers is a very good distinctive mark; in the *maritima* it is olive-green, whilst in the *coronata* it is white. The white spot on the inner webs of the exterior tail feathers, is also four times larger in the *coronata*, than in the *maritima*.

1 Great Crow Blackbird 2 Female.

Quiscalus Major.

Engraved by Alexander Lawson.

Painted from Nature by John Audubon F.A.S. Edinr.

GREAT CROW-BLACKBIRD.

QUISCALUS MAJOR.

Plate IV. Fig. 1, Male; 2, Female.

Quiscalus major, Vieill. *Nouv. Dict. d'Hist. Nat.* XXVIII, p. 487.
Gracula quiscala, Ord, *Journ. Acad. Nat. Sc. Philad.* I, p. 253.
Gracula barita, Wilson, *Am. Orn.* VI, Index p. viii.
Gracula quiscala, the Purple Jackdaw of the sea coast, Bartram, *Travels*, p. 290.
Corvus mexicanus? Gmel. *Syst.* I, p. 375, Sp. 42. Lath. *Ind.* p. 164, Sp. 36, Male.
Corvus zanoe? Gmel. *Syst.* I, p. 375, Sp. 44. Lath. *Ind.* p. 164, Sp. 37, Female.
Pica mexicana major? Briss. *Av.* II, p. 43, Sp. 4, Male.
Pica mexicana minor? Briss. *Av.* II, p. 44, Sp. 5, Female.
L'Hocizana? Buff. *Ois.* III, p. 103, Male.
Le Zanoé? Buff. *Ois.* III, p. 106, Female.
Mexican Crow? Lath. *Syn.* I, p. 396, Sp. 34, Male.
Lesser mexican Crow? Lath. *Syn.* I, p. 397, Sp. 36, Female.
Hocitzanatl, seu magnus Sturnus? Hernand. *Hist. An. Nov. Hisp.* p. 21, Male.
Tzanahoei? Hernand. *Hist. An. Nov. Hisp.* p. 22, Female.
Hoitzanatl? Ray, *Syn. Av.* p. 162, Male.
Tzanahoei, seu Pica mexicana Hernandezii? Ray, *Syn. Av.* p. 162, Female.

Philadelphia Museum, No. 1582, Male; No. 1583, Female.

No part of natural history has been more confused than that relating to North and South American birds of black plumage; which is by no means surprising, when we recollect that they are chiefly destitute of coloured markings, and that the greater number of admitted species, are founded on the short and inexact descriptions of travellers, who have neglected to observe their forms, habits, and characters. But little aid has been derived from the wretched plates hitherto given, for they seem better suited to increase the confusion than to exemplify the descriptions to which they are annexed, and every succeeding compiler has aggravated,

rather than diminished this complication of error. It is therefore solely by a studious attention to nature, that we can extricate these species from the uncertainty involving them, and place them in a distinct and cognisable situation. With these views we now give a faithful representation of both sexes of the Great Crow-Blackbird, drawn by that zealous observer of nature and skilful artist Mr. John J. Audubon, and hope thereby to remove all doubt relative to this interesting species.

For the same purpose we give in the following plate a figure of the female Common Crow-Blackbird, which differs so little from its mate, (admirably represented in the third volume of Wilson's Ornithology,) that it would be otherwise unnecessary. This measure we believe will be acceptable to ornithologists, as it furnishes them with means of comparing the females of both the species in question, whence the most striking distinctive characters are obtained; that of one species differing considerably in size and colour from the male, while the sexes of the other are very similar in appearance.

Wilson having mentioned this species in his catalogue of land birds, evidently intended to describe and figure it; but this he deferred, probably, in expectation of obtaining better opportunities of examination, which are not so readily presented, as the bird does not inhabit this section of the United States.

It would be difficult to ascertain whether or not Linné and Latham have mentioned this bird in any part of their works, but the reader may perceive our opinion on this point by referring to our synonymes, which, however, are given with much doubt, since we do not hesitate to say, that those authors have not published any satisfactory description of this species.

We shall not endeavour to settle the question relative to the species inhabiting South America, or even Mexico and the West Indies; but we may assert, that this is the only Blackbird found in the United States, besides those of Wilson, which, as is the case

with all that his pencil or pen has touched, are established incontestably: he may occasionally have been mistaken as to his genera, or incorrect in a specific name, but by the plate, description, and history, he has always determined his bird so obviously, as to defy criticism, and prevent future mistake.

Mr. Ord has published an excellent paper in the Journal of the Academy of Natural Sciences, proving the existence, in the United States, of two allied species of Crow-Blackbird, in which he gives new descriptions, indicates stable characters, and adds an account of their respective habits; but in attempting to correct Wilson, he has unfortunately misapplied the names. In this instance, he should not have charged Wilson with error, who is certainly correct in regard to the species he published; and even had this been doubtful, he who so well described and figured the Common Crow-Blackbird, ought to have been followed by ornithologists. Therefore, notwithstanding Mr. Ord's decision, we consider the *quiscala* of Wilson unquestionably the true *quiscala* of authors; this is so obvious, that it is unnecessary to adduce any evidence in support of our opinion, which, indeed, is sufficiently afforded by Mr. Ord's paper itself.

It is impossible to decide with certainty, what bird authors intended to designate by their *Gracula barita;* but after a careful review of the short and unessential indications, respective synonymes, and *habitat* given by different writers, we feel assured that they have not referred to one and the same species. Thus, the *barita* of Linné is a species not found in the United States, but common in the West Indies, called *Icterus niger* by Brisson, and afterwards *Oriolus niger* by Gmelin and Latham: the *barita* of Latham, his Boat-tailed Grakle, is evidently the same with the *quiscala:** Gmelin's *barita* is taken partly from that of Linné,

* It was probably by Latham, that Mr. Ord was led to misapply the names of the two species; for, perceiving that the *barita* of that author was the *quiscala*, he inferred, that the *quiscala* was the *barita*.

and partly from the Boat-tailed Grakle of Latham, being compounded from both species: we shall not be at the trouble of decyphering the errors of subsequent compilers.

Ornithologists are all at variance, as to the classification of these species. Linné and Latham improperly referred them to *Gracula;* Daudin, with no better reason, placed them under *Sturnus;* Temminck considers them as *Icteri,* Cuvier as *Cassici,* and Vieillot has formed a new genus for their reception. I have no hesitation in agreeing with the latter author, and adopt his name of *Quiscalus;* but I add to the genus, as constituted by him, the *Gracula ferruginea,* which he regarded as a *Pendulinus,* and which other authors have arranged in several different genera, making of it a profusion of nominal species. Wilson judiciously included that species in the same genus with those above mentioned, although other authors had placed it in *Turdus, Oriolus, &c.*

The genus *Quiscalus* is peculiar to America, and is composed of four well ascertained species, three of which are found in the United States: these are, *Quiscalus major,** *versicolor,* and *ferrugineus;* the fourth, *Quiscalus baritus,* inhabits the West Indies, and probably South America.

The species of this genus are gregarious, and omnivorous; their food being composed of insects, corn, and small grains, thus assisting and plundering the agriculturist at the same time. When the first European settlements were formed in North America, the havoc made by these birds and the Troopials in the grain fields, was so great, that a premium was given for their heads. Their destruction was easily effected, as they are not shy, and are more easily approached as their numbers decrease; but the evil which resulted from exterminating so many of these birds, was as unexpected as irremediable. The corn and pastures were so devoured

* We call the present species *Quiscalus major,* agreeably to Vieillot, who certainly intended this bird, although his description is a mere indication.

by worms and insects, that the inhabitants were obliged to spare the birds, in order to avert a scourge which had been previously unknown. As population increases, and a greater quantity of grain is cultivated, the ravages of these birds become less perceptible, and the injury they cause comparatively trifling.

The Great Crow-Blackbird is more than sixteen inches long, and twenty-two in extent. The bill, from the angle of the mouth, is one inch and three quarters, and its colour, like that of the feet, is black; the roof of the mouth is furnished with a slight osseous carina; the irides are pale yellow. The general appearance of the bird is black; the whole head and neck having bluish-purple reflections; the interscapular region, breast, belly, sides, and smaller wing coverts, are glossy steel-blue; the back, rump, and middling wing coverts, are glossed with copper-green; the vent, inferior tail coverts, and thighs, are plain black. The undescribed parts of the wings are deep black, slightly glossed with green, as well as the tail, which is cuneiform, capable of assuming a boat-shaped appearance, and measures nearly eight inches in length from its insertion, surpassing the tip of the wings by five inches.

The female is considerably shorter, measuring only twelve and a half inches in length, and seventeen inches and a half in extent. The bill, from the angle of the mouth, is one inch and a half long, and, with the feet, is black; the irides are of a still paler yellow than those of the male. The head and neck above are light brown, gradually passing into dusky towards the back, which, with the scapulars and lesser wing coverts, has slight greenish reflections; a whitish line passes from the nostrils over the eye, to the origin of the neck. The chin, throat, and breast, are dull whitish; the anterior part of the breast is slightly tinged with brownish; the flanks are brownish; the belly brownish-white; and the vent and inferior tail coverts are blackish-brown, each feather being margined with pale. The remaining parts are of a dull brownish-black, slightly glossed with greenish; the secondaries, tail coverts,

and tail feathers, having a slight banded appearance, which is equally observable in the male.

The young at first resemble the female, but have the irides brown, and the males gradually acquire the brilliant plumage of the adult.

The Great and Common Crow-Blackbirds, are both alike distinguished by the very remarkable boat-like form of the tail, but the great difference of size, appearance of the females, length of the tail, prominence of the osseous carina, and brilliancy of colouring, most obviously prove them to be altogether specifically distinct.

The Great Crow-Blackbird inhabits the southern part of the Union, where it is called Jackdaw; Georgia and Florida appear to be its favourite residence. The disposition of this species is extremely social, and they frequently mingle with the Common Crow-Blackbird; vast flocks are seen among the sea islands and neighbouring marshes on the main land, where they feed at low water, on the oyster beds and sand flats.

The chuck of our species is shriller than that of the Common Crow-Blackbird, and it has other notes which resemble the noise made by a watchman's rattle; their song is only heard in the spring, and though the concert they make is somewhat melancholy, it is not altogether disagreeable. Their nests are built in company, on reeds and bushes, in the neighbourhood of marshes and ponds: they lay about five eggs, which are whitish, spotted with dark-brown, as represented in the plate.

Mr. Ord mentions in his paper, that the first specimens he saw of this bird, were obtained on the 22d of January at Ossabaw Island, when but a few males were seen scattered over the cotton plantations. Advancing towards the south, they became more numerous; and in the early part of February, the males, unaccompanied by females, were common near the mouth of the river San Juan, in Florida. A few days after, the females appeared, and associated by themselves on the borders of fresh water ponds;

they were very gentle, and allowed themselves to be approached within a few feet, without becoming alarmed. Flocks composed of both sexes were seen about the middle of March.

About the latter end of November, they leave even the warm region of Florida, to seek winter quarters farther south, probably in the West Indies. Previous to their departure, they assemble in very large flocks, and detachments are seen every morning moving southward, flying at a great height. The males appear to migrate later than the females, as not more than one female (easily distinguishable even in the higher regions of the air by its much smaller size) is observed for a hundred males, in the last flocks.

The Great Crow-Blackbird is also very numerous in the West Indies, Mexico and Louisiana; but it does not frequent the northern, or even the middle states, like the Common Crow-Blackbird. Our opinion that the *Corvus mexicanus* of authors is the male of this species, and their *Corvus zanoe* the female, is corroborated by the male and female Great Crow-Blackbird being seen in separate flocks.

FEMALE COMMON CROW-BLACKBIRD.

QUISCALUS VERSICOLOR.

Plate V. Fig. 1.

See WILSON's *American Ornithology*, III, p. 44, Pl. 21, fig. 4, for the Male, and history.

Quiscalus versicolor, VIEILL. *Nouv. Dict. d'Hist. Nat.* XXVIII, p. 488.—NOBIS, *Obs. Nom. Wils. Orn. Journ. Acad. Nat. Sc. Philad.* III, p. 365.
Gracula quiscala, LINN. *Syst.* I, p. 165, Sp. 7. GMEL. *Syst.* I, p. 397, Sp. 7. LATH. *Ind.* p. 191, Sp. 7.
Gracula barita, GMEL. *Syst.* I, p. 396, Sp. 4. LATH. *Ind.* p. 191, Sp. 6. ORD, *Journ. Acad. Nat. Sc. Philad.* I, p. 254. (not of LINN.)
Oriolus ludovicianus, GMEL. *Syst.* I, p. 387, Sp. 31, (pied variety.)
Oriolus leucocephalus, LATH. *Ind.* p. 175, Sp. 4, (pied variety.)
Pica jamaicensis, BRISS. *Av.* II, p. 41, Sp. 3.
Monedula purpurea, the Purple Jackdaw, CATESBY, *Carolina*, I, p. 12, Pl. 12.
Gracula purpurea, the Lesser Purple Jackdaw, or Crow Blackbird, BARTR. *Trav.* p. 291.
Pie de la Jamaïque, BUFF. *Ois.* III, p. 97.
Cassique de la Louisiane, BUFF. *Ois.* III, p. 242. *Pl. Enl.* 646, (pied variety.)
Purple Grakle, PENN. *Arct. Zool.* Sp. 153. LATH. *Syn.* I, Part II, p. 462, Sp. 6.
Boat-tailed Grakle, PENN. *Arct. Zool.* Sp. 154. LATH. *Syn.* I, Part II, p. 460, Sp. 5.
White-headed Oriole, PENN. *Arct. Zool.* Sp. 147. LATH. *Syn.* I, Part II, p. 422, Sp. 4, (pied variety.)

Philadelphia Museum, No. 1578, Male; No. 1579, Female; No. 1602, whitish variety.

THE female Common Crow-Blackbird is figured in the annexed plate, that naturalists may have an opportunity of comparing it with the corresponding sex of the Great Crow-Blackbird, and thus receive a distinct idea of the difference between the two species, so well manifested in their females.

The specific name of this bird (*quiscala*) has been changed, in consequence of its having been applied to the genus: we have

Drawn from Nature by Titian R. Peale.

Engraved by Alexander Lawson

1. Female Crow Blackbird.
Quiscalus Versicolor.

2. Orange-crowned Warbler.
Sylvia Celata.

3. Lark Finch.
Fringilla Grammaca

substituted the name given by Vieillot, which is admirably appropriate. The English name employed by Wilson being now rendered inadmissible by the generic change, we have thought proper to adopt a local appellation.

The female Common Crow-Blackbird is eleven inches in length, and sixteen and a half in extent. The bill is nearly an inch and a half long, and, as well as the feet, black; the irides are yellowish-white; the whole head, neck, and upper part of the breast, are blackish, with steel blue, green and violet reflections, which are not so vivid as in the male. The general colour of the body, wings, and tail, is deep sooty-brown; the feathers of the back are margined with coppery and purplish; the rump, tail coverts, and wing coverts, are glossed with purplish; the lower part of the breast and flanks have a coppery reflection; the inferior tail coverts are obscurely glossed with violet. The tail is cuneiform, but slightly concave in flight, and is five inches long, extending two and a half inches beyond the tip of the wings; the feathers are glossed with very obscure greenish. In the male the tail is also cuneiform, and greatly concave, exhibiting a singular boat-shaped appearance, as in the preceding species, and even more remarkably so, according to Mr. Ord, which induced him to change the name.

We shall not attempt to make any additions to the almost complete, and very excellent history of this species, given by Wilson: but as the four species of *Quiscalus* are liable to be confounded, we shall proceed to give a few comparative observations, that the student may be enabled to distinguish them from each other.

Amongst other remarkable traits, the *Quiscalus ferrugineus* is at once known in all its various states, by its even tail, and comparatively smaller bill, which somewhat resembles that of a Thrush. In addition to the characters drawn from its dimensions, the *Quiscalus versicolor* can always be distinguished from its congeners, by the slight difference in size and colour, between the sexes; while, in the other species, the males and females are remarkably dis-

similar: the mouth of this species is, moreover, armed with a prominent osseous carina, a quarter of an inch long, which, in the others, is much smaller. That the *Quiscalus major*, and *Quiscalus baritus*, should have been confounded together, is not a little surprising, as the former is sixteen inches long, the tail being eight inches, and extending five inches beyond the tip of the wings; whilst the latter is only ten inches, the tail much less cuneiform, four inches and a half long, and extending but two inches beyond the tip of the wings; the osseous carina is similar in these two species, and the markings of the females are much alike. From this statement, it is apparent, that the females of the largest and smallest Crow-Blackbirds correspond in the disposition of their colours; a parity that does not exist in the intermediate species. In comparative size, however, they differ considerably: the female of the *baritus*, though smaller, as we have already stated, is, in proportion to its mate, considerably larger than that of the other, being only half an inch, whilst the female of the *major* is nearly four inches, smaller.

The individual represented in the annexed plate, is a remarkably fine one, in the most perfect state of plumage. It therefore more strongly resembles the male than is usual with its sex, which are generally much less brilliant in colouring, and more sooty-brown. This bird was obtained at Great Egg-harbour on the twenty-first of May, and was selected as the best female of several pairs, assembled to breed at one of the identical Fish-Hawk nests, in the interstices of which Wilson mentions having seen them building. One of their nests contained three eggs, and the species had not ceased to lay.

These birds, as we have had occasion personally to observe, like most of the feathered tribes, are subject to become either wholly or partially albinos. From this circumstance, numerous errors have been introduced in the pages of ornithological works.

ORANGE-CROWNED WARBLER.

SYLVIA CELATA.

Plate V. Fig. 2.

Sylvia celata, Say, *in Long's Expedition to the Rocky Mountains*, I, p. 169.

Philadelphia Museum, No. 7013.

This little bird, discovered early in May, at Engineer Cantonment, on the Missouri river, was first described and named by Say; the species was not uncommon at that season, and appeared to be on its passage further north. It is more particularly interesting, inasmuch as it enriches the Fauna of the United States with another species of the small sub-genus *Dacnis*, which may be ascertained by inspecting the bill, represented in the annexed plate.

The Orange-crowned Warbler is full five inches long, and seven in extent. The bill is dark horn colour, slender, straight, entire, and tapering to an acute point; the base of the inferior mandible is whitish beneath; the legs are dusky; the irides dark brown. The general plumage above is dull greenish-olive, the rump and tail coverts being bright yellowish-olive. The head is very slightly and inconspicuously crested; the feathers of the crest are orange at base, constituting a spot on the crown, visible only when they are elevated, being tipped with the common colour. The whole bird beneath is dull olive-yellow; the inferior tail coverts are pure yellow. The wings are destitute of spots or bands; the primaries are dark brown, olive-green on the exterior margin, which is much paler on the outer ones; the interior margin is whitish; the four outer primaries are sub-equal; the fifth is but very little shorter.

The tail is even, the feathers being dark brown, edged with olive-green on the outer, and with white on the inner web.

The Orange-crowned Warbler resembles several species of indigenous and foreign Warblers; and the females of others, such as that of the *Sylvia trichas*, may also be mistaken for it; but it may be distinguished from each of them respectively by particular characters, which it is not necessary to detail, as the concealed orange spot of the crown is a peculiarity not possessed by either of the allied species. The Nashville Warbler (*Sylvia rubricapilla*) of Wilson, seems to be more closely related to the Orange-crowned Warbler than any other. That bird, also, is evidently a *Dacnis*, and scarcely differs from our species, except in the white belly, the light ash colour of the head and neck, and the deep chestnut colour disposed in small touches on the crown, instead of an uniform orange colour.

The figure given in our plate is that of a male; and the only difference observable between the sexes is, that the rump of the male is of a brighter colour, approaching, in old birds, to a pure yellow.

During winter, the Orange-crowned Warbler is one of the most common birds in the neighbourhood of St. Augustin, Florida, almost exclusively frequenting the orange trees. Their manners resemble those of the kindred species, though they have a remarkable habit of constantly inflecting the tail, like the Pewee. The note consists of a chuck, and a faint squeak, but little louder than that of a mouse.

LARK FINCH.

FRINGILLA GRAMMACA.

Plate V. Fig. 3.

Fringilla grammaca, Say, *in Long's Expedition to the Rocky Mountains*, I, p. 139.

Philadelphia Museum, No. 6288.

For this very interesting new species, Ornithology is again indebted to Long's expedition, and particularly to Say, who gave it the name we have adopted, and informs us, in his notes, that many of these birds were shot in the month of June, at Bellefontaine, on the Missouri; and others were observed, the following spring, at Engineer Cantonment, near Council Bluffs.

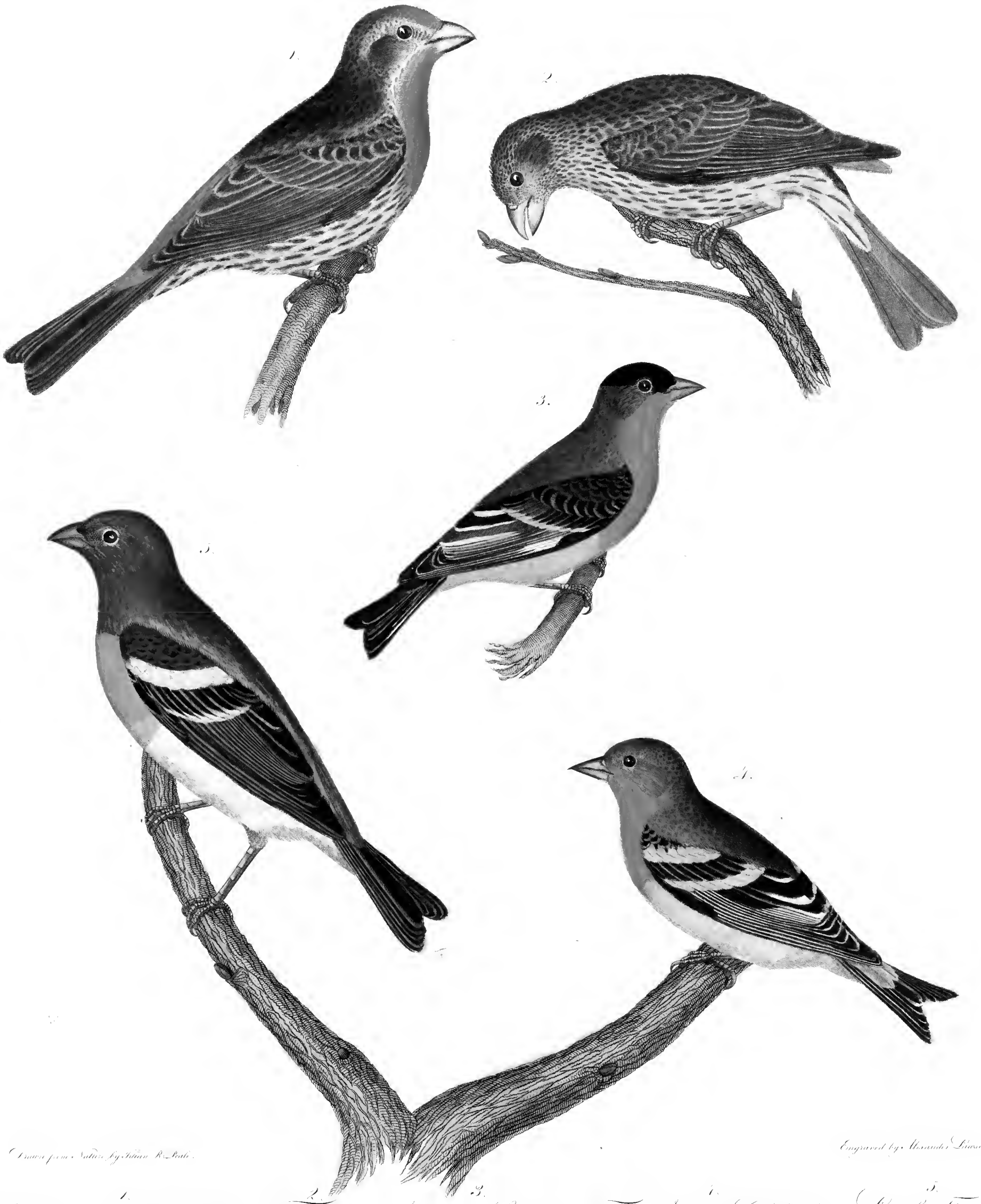
It seems probable that the range of this bird is limited, in a great measure, by the Mississippi on the east. Like the Larks, they frequent the prairies, and very seldom, if ever, alight on trees; they sing sweetly, and often continue their notes while on the wing.

The Lark Finch is six inches and a half long; its bill, a little notched at tip, is of a pale horn colour, with a slight elevation on the roof of the upper mandible. The feet are pale flax colour, tinged with orange; the irides are dark brown. On the top of the head are two dilated lines, blackish on the front, and passing into ferruginous on the crown and hind head, separated from each other by a whitish-cinereous line; from the eye to the superior mandible is a black line, which, as well as the eye, is enclosed by a dilated white line, contracted behind the eye; from the angle of the mouth proceeds a black line, which is much dilated into a ferruginous spot on the auricles; below this is a broad white line, margined beneath by a narrow black one, originating at the inferior base of

the lower mandible; the chin and throat are pure white. The neck above, the back, and rump, are dull cinereous-brown, each feather of the interscapular region having a blackish-brown disk; the neck beneath and breast are dull whitish-cinereous; a small blackish-brown spot is on the middle of the breast; the belly and vent are white. The wings are dusky-brown; the lesser wing coverts are margined with dull cinereous; the exterior primary is equal to the third; both are very little shorter than the second, which is longest; the outer webs of the second, third, and fourth primaries, being whitish near their bases, form a distinct spot on the wing. The tail is rounded, the feathers being blackish-brown; the two intermediate ones are immaculate, somewhat paler than the others. The adjoining ones have a small white spot at tip, which, on the lateral feathers, increases in size, until, on the exterior one, it occupies half the total length of the feather; whilst its exterior web is white to the base.

The female is very similar to the male, but the colours are duller, and the stripes on the head are not so decided; the auriculars, moreover, are yellowish-brown.

This species has the bill and feet precisely similar to those of Wilson's Black-throated Bunting, and those other *Fringillæ*, and supposed *Emberizæ*, of which I have constituted the sub-genus *Spiza*, in my "Observations on Wilson's Ornithology." It cannot be mistaken for any other species, being very peculiar in its markings and manners.



Drawn from Nature by Titian R. Peale.

Engraved by Alexander Lawson.

1. *Crimson-necked Bullfinch.* — *Pyrrhula Frontalis.*

2. *Female.*

3. *Arkansaw Siskin.* — *Fringilla Ballaria.*

4. *Female American Goldfinch.* — *Fringilla Tristis.*

5. *Lazule Finch.* — *Fringilla Amœna.*

CRIMSON-NECKED BULLFINCH.

PYRRHULA FRONTALIS.

Plate VI. Fig. 1, Male; Fig. 2, Female.

Fringilla frontalis, Say, *in Long's Expedition to the Rocky Mountains*, II, p. 40.

Philadelphia Museum, No. 6276, Male; No. 6277, Female.

Much confusion exists in the works of naturalists respecting those Finches and Bullfinches that are tinged with red; and, in fact, their great resemblance to each other, and their intricate synonymy, render them very difficult to elucidate. The only species in Wilson's work with which the present may be confounded, is the *Fringilla purpurea*, a bird closely related to ours, and for the first time well figured, and permanently established by that author.* But several other allied species may be mistaken for the Crimson-

* He was rather precipitate in asserting the *Fringilla rosea* and *Loxia erythrina* to be identical with his bird, as they are actually two very distinct species, belonging to the genus *Pyrrhula*, and proper to the old continent; whilst the *purpurea* is a true *Fringilla*, and peculiar to America. To those who have not critically investigated the subject, it may appear somewhat inconsistent to state, that the *erythrina* is not an inhabitant of this continent, when it is a well known fact, that many authors speak of it as an American bird. This apparent contradiction may be readily removed, by considering what bird those authors alluded to, when they stated the *erythrina* to be a native of North America. When Latham expressed a doubt in his Synopsis, whether the birds in the neighbourhood of New-York, so much resembling the *erythrina*, were not specifically the same, he alluded to the *Fringilla purpurea:* Gmelin, as usual, in his miserable compilation, inserted this doubt of Latham as a certainty. As to the Crimson-headed Finch of Pennant, it is evidently the *purpurea*, thus excusing, in part, the strange assertion of Wilson. Latham, also, committed an error in his Index, by placing the *Loxia erythrina* of Pallas and Gmelin, his own Crimson-headed Finch, as a variety of *Fringilla rosea.*

necked Bullfinch; two of these, belonging to the genus *Pyrrhula*, present so much analogy with the present species, judging from their descriptions, that we doubted the correctness of giving the latter a separate place, considering it identical with *Pyrrhula erythrina* of Temminck, whose description agrees better with it than that of any other. Yet, in addition to some differences discoverable by comparing the Crimson-necked Bullfinch with his description, we cannot admit, that an arctic bird of the old continent, known to visit even the more northern portion of the temperate climates only during very cold winters, and then not very regularly, should be found, in the month of July, on the sultry plains of the Arkansaw, and of course breeding there. We therefore conclude that our bird is not the *erythrina*, although we regret our inability to give differential characters, having never seen that species, as our endeavours to obtain a specimen have not been attended with success. The southern residence of our bird might lead us to suppose it the *Loxia* (*Pyrrhula*) *violacea*, which we have not seen, neither do we think the species well established. But, if we are to rely on the short description given of it, and on Catesby's figure, we cannot perceive much resemblance between them; their identity, however, would not much surprise us, when we consider that Catesby's figure of the *Pyrrhula violacea* is as much like our bird, as his figure of the Purple Finch is like what it is intended to represent. Having the authority of Say, we consider it as new, notwithstanding these doubts.

The Crimson-necked Bullfinch was procured by Long's party, near the Rocky Mountains, and Say described it in the journal of that expedition, under the name of *Fringilla frontalis*, adopting that genus in the comprehensive limits assigned by Illiger and Cuvier. The specific name given by Say is preoccupied in that genus by an African species; but, as we consider our bird a *Pyrrhula*, we think proper to retain his name.

The Crimson-necked Bullfinch is five inches and a half long.

The bill and feet are horn colour; the lower mandible is paler; the irides are dark brown. The head, neck beneath, and superior portion of the breast, are brilliant crimson, most intense near the bill and over the eye; the space between the bill and the eyes is cinereous-gray, as well as the cheeks, and the small feathers immediately around the bill; the crimson feathers are brown at base, being red only at tip. The occiput, and the neck above and on each side, are brown, with a reddish cast, the feathers being margined with pale; the back is dusky-brownish; the rump and superior tail coverts are crimson, but less vivid than that of the head; the inferior portion of the breast, the belly, and vent, are whitish, each feather having a broad fuscous line; the general plumage is lead colour at base. The wings are blackish-brown, the primaries being broadly margined within, towards the base, with whitish, and exteriorly edged with grayish; the coverts and secondaries are edged with dull grayish. The tail is blackish-brown, hardly emarginated; the lateral feathers are edged, on the inner side, with whitish.

Such is the description of our male specimen; but as it was procured when summer was far advanced, a season in which the plumage begins to fade, it is proper to observe, that the colouring of this bird is probably much more brilliant in its full spring dress, the crimson extending much further down on the back, &c. As the season advances, the tips of the feathers, which are the only parts of a crimson colour, being gradually worn off, the bird as gradually loses its brilliancy, and, in the autumnal and winter plumage, exhibits the humble appearance of the female.

The female is altogether destitute of the brilliant colour, being dusky-brown above, the feathers margined on each side with dull whitish; the whole inferior surface is whitish, each feather having a brown longitudinal line in the middle, obsolete on the vent, which is almost pure white.

A change similar to that above mentioned, takes place in the

Purple Finch, whose habits also much resemble those of the Crimson-necked Bullfinch; but the form of its bill is certainly that of a Finch, and will always distinguish it from the species we are describing, the bill of which is unequivocally of the Bullfinch form. The different tints of red adorning these birds, will also, at once strike the eye of the least expert in discriminating species; in the present bird the tint is vivid crimson, whilst in the Purple Finch it is rosaceous. In addition to these characters, the latter is a somewhat larger bird, with a pure white belly and inferior tail coverts, and a deeply emarginated tail; whilst the former has a nearly even tail, and its belly and inferior tail coverts are striped with dusky.

Some persons, without doubt, may think it highly improper to separate generically two birds, so closely allied as the present species and the Purple Finch, which may be mistaken for the same species; but we may remark, that they stand at the extreme limit of their respective genera, and form the links of union between ***Pyrrhula*** and ***Fringilla.*** It is true, that the intimate alliance of these two groups would seem to justify Illiger, Meyer, and others, in uniting them under the same genus; but, as ***Fringilla*** is so vast in the number of its species, and ***Pyrrhula*** has a few distinctive characters, we choose to follow Temminck, Vieillot, and other naturalists, by arranging them generically separate. The closeness of affinity between these two birds, when thus properly disposed, affords no good reason for the unity of their genera; for, if we proceed to the abolition of all artificial distinction between genera united by almost imperceptible gradations, ***Sylvia*** would be joined to ***Turdus***, ***Myiothera*** to ***Troglodytes***, ***Lanius*** to ***Muscicapa***, the whole of these would be confused together; and, in fact, orders and classes would be considered as genera; and even the vast groups, thus formed, would be still observed to unite inseparably at their extremes, and we should finally be compelled to consider all living bodies, both animal and vegetable, as belonging to one genus. This argument, however, may not convince every naturalist

of the propriety of our arrangement, and they must, therefore, place the two species, strictly according to nature, in one genus, and consider the present as a *Fringilla;* but, how unnatural will then be the situation of *Pyrrhula vulgaris*, and *Pyrrhula enucleator!*

The inflated form of the bill, the curvature of both mandibles, very apparent in the superior one, as well as the compression of both at tip, are obvious characters, which distinguish the species of *Pyrrhula* from the *Fringillæ*, in which both mandibles are nearly straight, and present a conic form on every side.

Berries, and seeds which they extract from the pericarp, buds, and young shoots of different plants, constitute the food of the Bullfinches. They generally frequent forests and bushy places, building their nests on small trees, or low branches of large ones: the females lay four or five eggs. The greater number of the species moult twice a year; the sexes differ considerably in appearance. They reside in cold and temperate climates, with the exception of a few species, that inhabit Africa and South America.

The Crimson-necked Bullfinch is found in the district of country extending along the base of the Rocky Mountains, near the Arkansaw river, and has not been observed elsewhere. In the month of July, when our specimens were obtained, these birds occur in small scattered flocks, keeping mostly on the tops of the cotton-wood trees, on whose buds they partially feed. Their voice considerably resembles that of their relative, the *Fringilla purpurea.*

ARKANSAW SISKIN.

FRINGILLA PSALTRIA.

Plate VI. Fig. 3.

Fringilla psaltria, SAY, *in Long's Expedition to the Rocky Mountains*, II, p. 40.

Philadelphia Museum, No. 6278.

"A VERY pretty little bird," writes Say, in his precious zoological notes to the journal of Long's expedition, "was frequently seen hopping about in the low trees or bushes, singing sweetly, somewhat in the manner of the American Goldfinch, or Hempbird, *Fringilla tristis*. The tints, and the distribution of the colours of its plumage, resemble, in a considerable degree, those of the autumnal and less brilliant vesture of that well known species. It may, however, be distinguished, in addition to other differences, by the black tip of its tail feathers, and the white wing spot."

The Arkansaw Siskin inhabits the country near the base of the Rocky Mountains, south of the river Platte, and probably is also to be found in Mexico. The only specimen brought by the party, was shot on the sixteenth of July, near Boiling Spring creek: on the annexed plate, it is figured in company with the American Goldfinch in autumnal plumage, for the sake of comparison.

The Arkansaw Siskin is four inches and a quarter long; the bill is yellowish, tipped with blackish; the feet are flesh colour; the irides burnt-umber. The top of the head is blue-black; the cheeks are dusky-olivaceous; the neck above and half its side, the back, and rump, are olivaceous, more or less intermixed with dusky and yellowish, particularly on the rump; the superior tail coverts are black, varied with olivaceous: all the under parts, from the very

base of the bill to the under tail coverts inclusively, are of a pure bright yellow. The wings are brownish-black, the smaller wing coverts being very slightly tinged with blue, and edged with olivaceous; the greater wing coverts are tipped with white, which forms a narrow band across the wing; the primaries, excepting the exterior one, are slightly edged with white; the third, fourth, fifth, sixth, and seventh, are white towards the base, so as to exhibit a white spot beyond the wing coverts; the first four primaries are nearly equal in length, the fifth is a quarter of an inch shorter; the secondaries are broadly margined with white exteriorly, towards their tips. The tail is slightly emarginated, the feathers being blackish, slightly edged with dull whitish; the three exterior ones are widely pure white on the middle of their inner webs.

The specimen we have just described is a male, evidently in perfect plumage; the female, and state of imperfect plumage, are unknown; but, without risking any great deviation from the truth, we may state, from analogy, that the young resemble the female, which must be destitute of the black cap, and have the colours less vivid and less pure.

The Arkansaw Siskin certainly resembles the American Goldfinch in its winter dress; but a still more striking similarity exists in some other birds, such as the European Siskin (*Fringilla spinus*), and the Olivarez (*Fringilla magellanica*, Vieill.) of South America; and it is so similar to the European, that it might with a much greater degree of propriety be considered as a variety, than those regarded as such by authors. They can, however, be easily distinguished by the following comparative characters: all the under parts of the Arkansaw Siskin are bright yellow, whilst the corresponding parts of the European Siskin are tinged with greenish, the throat being black, and the belly, vent, and flanks whitish, spotted longitudinally with black; the margins and spots of the wing and tail feathers are white in our bird, and yellow in the European Siskin; the white spots on the tail of the Arkansaw

Siskin are confined to the three outer feathers, whilst in the foreign bird all the feathers, excepting the two middle ones, are marked with yellow; the bill of our species is also a little shorter, less compressed, and less acuminated; finally, we may notice another trifling difference, which consists in the proportional length of the primaries, the four first being nearly equal in the American bird, and the three first only in the European, the fourth being almost a quarter of an inch shorter. The other approximate species, ***Fringilla magellanica,*** Vieill. considered by Gmelin and Latham as a variety of the European Siskin, is readily distinguishable by having the head entirely black.

Though the Mexican Siskin (***Fringilla mexicana,*** Gmel.) may prove to be the female of our bird, or the male in an imperfect state of plumage, (and, from the locality, we should possibly have referred it to that name, had the classification of it fallen to our lot,) yet, as nothing positive can be drawn from so unessential an indication as that of the Mexican Siskin, we have no hesitation in following the same course with Say, who considers it as entirely new, and have retained his elegant name of ***Fringilla psaltria.*** It is very possible that not only the ***Fringilla mexicana,*** but also the Black Mexican Siskin, (***Fringilla catotol,*** Gmel.) may be the same bird as our ***Fringilla psaltria;*** but how can we determine, from the vague descriptions that have been given of those species? they are equally applicable to the American Goldfinch in its dull state of plumage; and Wilson expresses a doubt whether or not the Black Mexican Siskin is the same as his new species, ***Fringilla pinus.***

All these pretty little birds belong to the sub-genus ***Carduelis,*** having a more slender, acute, and elongated bill, than other ***Fringillæ.***

FEMALE AMERICAN GOLDFINCH.

FRINGILLA TRISTIS.

Plate VI. Fig. 4.

See Wilson's *American Ornithology*, I, p. 20, Pl. 1, fig. 2, for the Male, and history.

Fringilla tristis, Linn. *Syst.* I, p. 320, Sp. 12, Male. Gmel. *Syst.* I, p. 907, Sp. 12. Lath. *Ind.* p. 452, Sp. 64. Vieill. *Nouv. Dict. d'Hist. Nat.* XII, p. 167.
Fringilla spinus, var. γ Gmel. *Syst.* I, p. 914, Sp. 25, Male, in winter plumage.
Carduelis americana, Briss. *Av.* III, p. 64, Sp. 3.
Carduelis americanus, the American Goldfinch, Catesby, *Carolina*, I, p. 43, Pl. 43, Male in spring dress. Bartr. *Trav.* p. 291.
Chardonneret jaune, Buff. *Ois.* IV, p. 212.
Chardonneret du Canada, Buff. *Pl. Enl.* 202, fig. 2, Male, in spring dress.
Tarin de la Nouvelle York, Buff. *Ois.* IV, p. 231. *Pl. Enl.* 292, fig. 1, Male changing; fig. 2, Male in winter dress.
Golden Finch, Penn. *Arct. Zool.* Sp. 242.
American Goldfinch, Edwards, *Glean.* II, p. 133, Pl. 274, Male and Female. Lath. *Syn.* II, Part I, p. 288, Sp. 57. Id. 1st Suppl. p. 166.
Siskin, var. b, Lath. *Syn.* II, Part I, p. 291, Sp. 58, Male changing.

Philadelphia Museum, No. 6344, Male; No. 6345, Female; No. 6346, Albino.

We have been induced by the analogy existing between the preceding new species and this common bird, to figure them as companions on the same plate, that they may be immediately and readily compared. To give the present figure more interest, we have chosen the female, though we might with equal propriety have selected the male in winter plumage, as the latter differs but slightly from its mate during that season. The very great dissimilarity between the sexes in their spring dress, will justify the reappearance of a bird already given by Wilson, more especially as

it has, in this state, been mistaken for a distinct species, and most unaccountably arranged in the systems as a variety of the European Siskin.

The history of this bird, which so completely resembles the Goldfinch of Europe in song and habits, being nearly completed by the golden pen of Wilson, we shall not attempt to add any observations of our own, but shall refer the reader to his volume, quoted above, for its biography. As we cannot but observe that his description is short and somewhat imperfect, probably owing to the opinion he at first entertained, but afterwards judiciously relinquished, that a minute description of common birds is superfluous, we shall proceed to describe the species in all its different states.

The male American Goldfinch in summer dress, represented by Wilson in his first plate, is four and a half inches long, and eight in extent. The bill resembles that of the European Goldfinch, and, as well as the feet, is of a reddish-cinnamon colour; the irides are dark brown. The front and vertex are glossy black; the remaining part of the head, and all the body, rich lemon-yellow; the superior and inferior tail coverts are white, as well as the thighs. The wings and tail are black, the small coverts of the wings being yellow externally, and white on the inner side and at tip; the greater coverts are tipped with white, an arrangement which exhibits two white bands across the wings; the first and third primaries are equal, hardly shorter than the second, which is the longest, the fourth being nearly as long as the third; the secondaries are margined with white. The tail is emarginated, the feathers being black, slightly edged with white, and having a large pure white spot on the inner web at tip.

The female, as is usual in this family of birds, is rather smaller than the male, and is widely different from that sex in the colours of its plumage. The bill and feet are brownish; the lower mandible is whitish at base: the head has no appearance of black,

and, with the neck, the back, and rump, is brownish-olive, the latter part being of a lighter shade than the preceding portions; the upper tail coverts are greenish-white. The frontlet, cheeks, sides of the neck, throat, and upper part of the breast, are pale greenish-yellow; the lower portion of the breast, belly, vent, flanks, under wing and under tail coverts, are whitish. The wings and tail, which always afford the most constant specific characters, are like those of the male, except that the black colour is less intense, and the white is less pure, being slightly tinged with rufous.

In this state of plumage, the bird closely resembles the *Fringilla citrinella* of the south of Europe, which however can always be distinguished from it by several characters, but more particularly by its greenish-yellow rump, and by being destitute of the whitish spot at the tip of the inner web of the tail feathers. The young are so like the females as to be distinguished with difficulty; their colours, however, are still less lively; they assume the adult livery in the spring, but do not exhibit all the brilliancy of the perfect bird until the third moult.

The American Goldfinch moults twice a year, in the seasons of spring and autumn. At the spring moult the males obtain their vivid colouring, which is lost at the autumnal change, and replaced by a more humble dress, similar to that of the female, from which sex they cannot then be readily distinguished. The black of the wings is, however, somewhat more intense; the white of the wings and of the tail is dull and dirty, and a yellowish tint prevails around the eyes, as well as on the neck. From this statement it follows, that Wilson's figure represents the adult male in that brilliant dress in which it appears for the space of four or five months only; whilst the figure in the annexed plate exhibits the invariable colours of the female and young, as well as the appearance of the male for the remaining seven months in the year.

As the season advances, the plumage of the adult male gradually changes, but not simultaneously in the different individuals, so that

in the spring and autumn we rarely find two that are alike; some being more or less yellow, having a rudiment of black on the head, &c. according as the moulting process is more or less advanced.

A remarkable variety is exhibited in a changing male, which I shot near Philadelphia, in the month of April, and which is therefore considerably advanced towards perfect plumage. All the primaries are pure white on the outer web towards the base, thus constituting, in the most obvious manner, that white spot beyond the wing coverts, assigned by Say as a good discriminating mark between this species and the preceding. The fact we have related diminishes the value of this character, which is nevertheless a very good one; but as many other distinctions are observable, we need not rely exclusively upon it. The deviation we have here mentioned is the more remarkable, as the greater number of species allied to this bird have that spot either white or yellow.

Since writing the above, I obtained, from one of the large flocks in which these birds congregate in the autumn, several specimens of both sexes, more or less distinguished by the marking above stated as peculiar to the variety.

LAZULI FINCH.

FRINGILLA AMŒNA.

Plate VI. Fig. 5.

Emberiza amœna, Say, *in Long's Expedition to the Rocky Mountains*, II, p. 47.

Philadelphia Museum, No. 5919.

The genus ***Emberiza***, though very natural, and distinguished by well marked characters, has, notwithstanding these advantages, been often misunderstood; and authors, without consulting the boundaries assigned to it by themselves, have recorded a copious list of species, whilst in nature its limits are much restricted. We are not therefore surprised, that so acute a zoologist as Say should have arranged his bird in that genus, particularly as it is more closely allied to ***Emberiza*** than many of those, not only of Wilson, but even of Linné and Latham.

This bird, which we have no hesitation in pronouncing one of the most beautiful of its tribe, would be placed by Vieillot in his genus ***Passerina***, but according to my classification it belongs to the genus ***Fringilla***, and to that American sub-genus lately established in my "Observations on the Nomenclature of Wilson's Ornithology," under the name of ***Spiza***. As a species, it is more intimately allied to ***Fringilla ciris*** and ***Fringilla cyanea***,* which I stated in that paper to differ so much from their congeners, particularly in the greater curvature of the upper mandible, as to deserve, perhaps, a separation into a small sub-genus by themselves:

* Its relation to *Fringilla cyanea*, considered as an *Emberiza*, probably induced Say to place it under that genus.

this would unite *Fringilla* to *Tanagra*, as *Spiza*, on the other hand, shows its transition to *Emberiza*.

The Lazuli Finch is five inches and three quarters long. The bill is formed like that of the Indigo-bird, (*Fringilla cyanea*, Wils.) but is emarginated near the tip, being horn colour, as well as the feet; the irides are dark brown. The whole head and neck are brilliant verdigrise-blue; the back is brownish-black, intermixed with blue, and a little ferruginous-brown; the rump is pure verdigrise-blue: the superior portion of the breast is pale ferruginous; the lower part of the breast, the belly, and inferior tail coverts, are white. The smaller wing coverts are blue; the middling coverts are blackish at base, and broadly tipped with white, forming a wide band across the wing; the greater wing coverts are blackish, obscurely margined with blue, and slightly tipped with white on the exterior web, constituting a second band across the wings parallel to the first, but much narrower; the primaries and secondaries are blackish, obscurely margined with blue on the outer web; the under wing coverts are whitish, a little intermixed with blue. The tail is slightly emarginated, the feathers being blackish, edged with blue on the outer web, and with white on the inner web at tip.

The above description of this handsome bird is taken from a male in summer plumage, the only specimen brought by Long's exploring party; hence we are unable to give any positive information relative to the female and young, though from analogy we must believe them in great part destitute of the blue colour, and otherwise less brilliantly adorned.

This species appears to be rather rare; it is found along the Arkansaw river, near the base of the Rocky Mountains, during the summer months; they frequent the bushy valleys, keeping much in the grass, and seldom alight on shrubs or trees. In this respect, also, they resemble the Indigo-bird, and probably their habits are the same, although the note is entirely dissimilar.

1. Sulvous or Cliff Swallow.
Hirundo Sulva.

2. Burrowing Owl.
Strix Cunicularia.

FULVOUS OR CLIFF SWALLOW.

HIRUNDO FULVA.

Plate VII. Fig. 1.

Hirundo fulva, Vieill. *Ois. de l'Am. Sept.* I, p. 62, Pl. 32. Stephens, *Cont. of* Shaw's *Zool.* X, Part I, p. 126. Dewitt Clinton, *Ann. Lyceum Nat. Hist. N. Y.* I, p. 156.
Hirundo lunifrons, Say, *in Long's Expedition to the Rocky Mountains*, II, p. 47.

Philadelphia Museum, No. 7624.

With the exception of a very imperfect description, little was known relative to this interesting bird, anterior to Long's expedition to the Rocky Mountains. One of the notes annexed to the account of that journey contains an excellent description of this Swallow, with a notice of its habits, and remarkable manner of building. Mr. Dewitt Clinton has recently published a paper on the same subject, accompanied by some observations from Mr. Audubon. Combining what these gentlemen have made known with the information previously given by Vieillot and Say, we can present a tolerably complete history of the Cliff Swallow.

Some doubts having been entertained whether the *Hirundo lunifrons* of the Rocky Mountains be the same species as the *Hirundo fulva* of the western part of New-York, I was desirous of deciding the question by comparing the specimens; this I accomplished, through the politeness of Dr. Dekay of New-York, who, with the kindness and liberality distinctive of those who cultivate science for its own sake, sent me the specimen and nest deposited by Mr. Clinton in the cabinet of the Lyceum. Thus being possessed of the individuals in question, we are enabled to place their specific identity beyond the reach of future uncertainty.

That Say considered his *Hirundo lunifrons* as a new bird, is

entirely attributable to the incorrectness of Vieillot's figure, which is one of those better suited to mislead than to assist the naturalist in his researches. The most striking characteristic of the ***Hirundo fulva*** is its even tail; yet Vieillot has represented this part as forked. We are therefore not surprised that our learned zoologist, who had no opportunity of consulting the coloured plate, should not have even thought of comparing his bird with that of Vieillot, who probably figured it with a forked tail merely because it was *a **Swallow.*** The characters of the Cliff Swallow are so remarkable, and its manner of building is so peculiar, that, when these are accurately delineated, it cannot be mistaken for any other species.

The Cliff Swallow is five and a half inches long. The bill is black, and the feet dusky; the irides are dark brown. A narrow black line extends over the bill to each eye; the front is pale rufous, and the remaining part of the crown black-violaceous; the chin, throat, and cheeks, are dark ferruginous, extending in a narrow band on the hind head; the upper part of the body is black, glossed with violaceous; the inferior part of the rump, and some of the tail coverts, are pale ferruginous; the breast is of a pale rufous-ash colour, and the remaining under parts are whitish, tinged with brownish-ferruginous. The wings and tail are blackish, the small wing coverts being glossed with violaceous; the inferior wing coverts are ashy-brown: the tail is nearly entire, somewhat shorter than the tips of the wings; the exterior tail feather is slightly edged with whitish on the inner vane: the wing and tail feathers have their shafts black above, and white beneath.

This description is taken from our finest male, which is also represented in the plate; no difference exists between the sexes, and the young, even during early age, can scarcely be distinguished from the parents, except by having the front white instead of rufous. We are informed by Vieillot, that some individuals have all the inferior surface of the body tinged with the same colour as that of the throat; these are probably very old males.

A very singular trait distinguishes the migrations of this bird. While the European or white variety of the human race is rapidly spreading over this continent, from its eastern borders to the remotest plains beyond the Mississippi, the Cliff Swallow advances from the extreme western regions, annually invading a new territory farther to the eastward, and induces us to conclude, that a few more summers will find it sporting in this immediate vicinity, and familiarly established along the Atlantic shores.

Like all other North American Swallows, this species passes the winter in tropical America, whence in the spring it migrates northward, for the purpose of breeding. It appears to be merely a spring passenger in the West Indies, remaining there but a few days, according to Vieillot, who, not seeing any in the United States, and observing some while at sea, in August, in the latitude of Nova Scotia, supposed that they propagated in a still more northern region. As we have not received any account of their inhabiting the well explored countries around Hudson's Bay, we are led to the conclusion, that the western wilds of the United States have hitherto been their summer resort, and that not until recently have they ventured within the domains of civilized man. Be this as it may, they were observed in great numbers, by Major Long's party, near the Rocky Mountains, in the month of July; and a few were also seen on the banks of the Missouri river. Within ten or twelve years, they have become familiar in different localities of Ohio, Kentucky, &c. whence they are extending very rapidly, and have recently appeared in the western part of New-York. In order to show the rapid progress of this little stranger, we quote the following passage from Mr. Clinton's interesting paper.

The Fulvous Swallow "first made its appearance at Winchell's tavern, on the high road, about five miles south of Whitehall, near Lake Champlain, and erected its nest under the eaves of an outhouse, where it was covered by the projection of a roof. This was

in 1817, and in this year there was but one nest; the second year seven; the third twenty-eight; the fourth forty; and in 1822 there were seventy, and the number has since continued to increase."

"It appeared in 1822 at Whitehall, on the fifth of June, and departed on the twenty-fifth of July; and these are the usual times of its arrival and disappearance."

This active little bird is, like its congeners, almost continually on the wing, and feeds on flies and other insects, while performing its aerial evolutions. Their note is different from that of other Swallows, and may be well imitated by rubbing a moistened cork around in the neck of a bottle. The species arrive in the west from the south early in April, and immediately begin to construct their symmetrical nests, which are perfected by their united and industrious efforts. At the dawn of day they commence their labours, by collecting the necessary mud from the borders of the river or ponds adjacent, and they persevere in their work until near mid-day, when they relinquish it for some hours, and amuse themselves by sporting in the air, pursuing insects, &c. As soon as the nest acquires the requisite firmness it is completed, and the female begins to deposit her eggs, which are four in number, white, spotted with dusky brown. The nests are extremely friable, and will readily crumble to pieces: they are assembled in communities, as represented in the back-ground of our plate. In unsettled countries these birds select a sheltered situation, under a projecting ledge of rock; and, in civilized districts, they have already evinced a predilection for the abodes of man, by building against the walls of houses, immediately under the eaves of the roof, though they have not in the least changed their style of architecture. A nest from the latter situation is now before me; it is hemispherical, five inches wide at its truncated place of attachment to the wall, from which it projects six inches, and consists exclusively of a mixture of sand and clay, lined on the inside with straw and dried grass, negligently disposed for the reception of the eggs. The whole

external surface is roughened by the projection of the various little pellets of earth which compose its substance. The entrance is near the top, rounded, projecting and turning downward, so that the nest may be compared to a chemist's retort, flattened on the side applied to the wall, and with the principal part of the neck broken off.

So great is the industry of these interesting little architects, that this massive and commodious structure is sometimes completed in the course of three days. About the middle of July, some nests found near the Rocky Mountains contained young ones, while in others the process of incubation had not terminated. It is probable that the Cliff Swallows rear two broods in that region, though in Kentucky and Ohio, agreeably to Mr. Audubon, they have but one in the year. During the first few days of August they assemble in flocks, and after several attempts to commence their migration, they finally succeed in obtaining a unanimity of purpose, and they disappear as suddenly as they came.

BURROWING OWL.

STRIX CUNICULARIA.

Plate VII. Fig. 2.

Strix cunicularia, Molina, *Hist. Chili*, (Am. ed.) I, p. 184. Gmel. *Syst.* I, p. 192, Sp. 28. Lath. *Ind.* p. 63, Sp. 38. Vieill. *Ois. de l'Am. Sept.* I, p. 48. Say, *in Long's Expedition to the Rocky Mountains*, II, p. 36 and 200.
Ulula cunicularia, Feuillée, *Journ. Obs. Phys.* p. 562.
Noctua coquimbana, Briss. *Av.* I, p. 525, Sp. 11.
Coquimbo Owl, Lath. *Syn.* I, p. 145, Sp. 33.

Philadelphia Museum, No. 472.

Venerable ruins, crumbling under the influence of time and vicissitudes of season, are habitually associated with our recollections of the Owl; or he is considered as the tenant of sombre forests, whose nocturnal gloom is rendered deeper and more awful by the harsh dissonance of his voice. In poetry he has long been regarded as the appropriate concomitant of darkness and horror; and, when heard screaming from the topmost fragments of some mouldering wall, whose ruggedness is but slightly softened by the mellowing moonlight, imagination loves to view him as a malignant spirit, hooting triumphantly over the surrounding desolation! But we are now to make the reader acquainted with an owl to which none of these associations can belong; a bird that, so far from seeking refuge in the ruined habitations of man, fixes its residence within the earth; and, instead of concealing itself in solitary recesses of the forest, delights to dwell on open plains, in company with animals remarkable for their social disposition, neatness, and order. Instead of sailing heavily forth in the obscurity of the evening or morning twilight, and then retreating to mope away

the intervening hours, our Owl enjoys the broadest glare of the noon-day sun, and flying rapidly along, searches for food or pleasure during the cheerful light of day.

The votaries of natural science must always feel indebted to the learned and indefatigable Say, for the rich collection of facts he has made whenever opportunities have been presented, but more especially in the instance of this very singular bird, whose places of resort, in this country, are too far distant to allow many the pleasure of examining for themselves. We feel doubly disposed to rejoice that the materials for the history of our bird, are drawn from his ample store, both on account of their intrinsic excellence, and because it affords us an opportunity of evincing our admiration of the zeal, talents, and integrity, which have raised this man to the most honourable and enviable eminence as a naturalist.

In the trans-Mississippian territories of the United States, the Burrowing Owl resides exclusively in the villages of the Marmot, or Prairie Dog, whose excavations are so commodious, as to render it unnecessary that our bird should dig for himself, as he is said to do in other parts of the world, where no burrowing animals exist. These villages are very numerous, and variable in their extent, sometimes covering only a few acres, and at others spreading over the surface of the country for miles together. They are composed of slightly elevated mounds, having the form of a truncated cone, about two feet in width at base, and seldom rising as high as eighteen inches above the surface of the soil. The entrance is placed either at the top or on the side, and the whole mound is beaten down externally, especially at the summit, resembling a much used foot-path.

From the entrance, the passage into the mound descends vertically for one or two feet, and is thence continued obliquely downwards, until it terminates in an apartment, within which the industrious Marmot constructs, on the approach of the cold season, the comfortable cell for his winter's sleep. This cell, which is

composed of fine dry grass, is globular in form, with an opening at top capable of admitting the finger; and the whole is so firmly compacted, that it might, without injury, be rolled over the floor.

It is delightful, during fine weather, to see these lively little creatures sporting about the entrance of their burrows, which are always kept in the neatest repair, and are often inhabited by several individuals. When alarmed they immediately take refuge in their subterranean chambers, or if the dreaded danger be not immediately impending, they stand near the brink of the entrance, bravely barking and flourishing their tails, or else sit erect to reconnoitre the movements of the enemy.

The mounds thrown up by the Marmot in the neighbourhood of the Rocky Mountains, have an appearance of greater antiquity than those observed on the far distant plains. They sometimes extend to several yards in diameter, although their elevation is trifling, and, except immediately surrounding the entrance, are clothed with a scanty herbage which always distinguishes the area of these villages. Sometimes several villages have been observed almost entirely destitute of vegetation, and recollecting that the Marmot feeds exclusively on grasses and herbaceous plants, it seems singular that this animal should always choose the most barren spot for the place of his abode. However this may be accounted for, it at least affords an opportunity of beholding the approach of his enemies, and allows him to seek, within the bosom of the earth, that security which he has neither strength nor arms to command.

In all these Prairie Dog villages the Burrowing Owl is seen moving briskly about, or else in small flocks scattered among the mounds, and at a distance it may be mistaken for the Marmot itself, when sitting erect. They manifest but little timidity, and allow themselves to be approached sufficiently close for shooting; but if alarmed, some or all of them soar away, and settle down again at a short distance; if further disturbed, their flight is con-

tinued until they are no longer in view, or they descend into their dwellings, whence they are difficult to dislodge.

The burrows into which these Owls have been seen to descend, on the plains of the river Platte, where they are most numerous, were evidently excavated by the Marmot, whence it has been inferred by Say, that they were either common, though unfriendly residents of the same habitation, or that our Owl was the sole occupant of a burrow acquired by the right of conquest. The evidence of this was clearly presented by the ruinous condition of the burrows tenanted by the Owl, which were frequently caved in, and their sides channelled by the rains, while the neat and well preserved mansion of the Marmot, showed the active care of a skilful and industrious owner. We have no evidence that the Owl and Marmot habitually resort to one burrow; yet we are well assured by Pike, and others, that a common danger often drives them into the same excavation, where lizards and rattlesnakes also enter for concealment and safety.

The Owl observed by Vieillot in St. Domingo digs itself a burrow two feet in depth, at the bottom of which its eggs are deposited on a bed of moss, herb-stalks, and dried roots. These eggs are two in number, of a very pure white, nearly spheroidal, and about as large as those of the Dove. When the young are only covered with down, they frequently ascend to the entrance to enjoy the warmth of the sun, but as soon as they are approached, they quickly retire into the burrow.

The note of our bird is strikingly similar to the cry of the Marmot, which sounds like *cheh, cheh,* pronounced several times in rapid succession; and were it not that the Burrowing Owls of the West Indies, where no Marmots exist, utter the same sound, it might be inferred, that the Marmot was the unintentional tutor to the young Owl: this cry is only uttered as the bird begins its flight. Vieillot states that the Burrowing Owl inhabiting St. Domingo, sometimes alights on farm-houses at night, and produces a note

which resembles that of the syllables *hoo, hoo, oo, oo;* but has he not mistaken a nocturnal species for it in this case?

The food of the bird we are describing, appears to consist entirely of insects, as, on examination of its stomach, nothing but parts of their hard wing-cases were found. The authors we have quoted, inform us, that, in Chili and St. Domingo, the Burrowing Owls also feed on rats, mice, and reptiles, which we cannot suppose to be the case with the bird found in the United States, as our explorers never could discover the slightest reason for believing that they preyed on the Marmots, whose dwellings they invade.

Throughout the region traversed by the American expedition, the Marmot was unquestionably the artificer of the burrow inhabited by the Owl, while the testimony of Vieillot is equally conclusive, that the Owl digs for himself when he finds no burrow to suit his purpose; but, preferring one already made, his fondness for the Prairie Dog villages is readily explained.

Whether only a single species of Burrowing Owl inhabits the vast continent of North and South America, or whether that of Chili mentioned by Molina, that of St. Domingo described by Vieillot, and the Owl of the Western American territory, be distinct though closely allied species, can only be determined by accurate comparisons.* When we consider the extraordinary habits attributed to all those, as well as their correspondence in form and colours noted in the several descriptions, we are strongly inclined to believe that they are all of the same species; nevertheless, Vieillot states his bird to be somewhat different from that of Molina, and the eggs of the Burrowing Owl of the latter are spotted with yellow, whilst those of the former are immaculate. We have to regret that no figure has hitherto been published, and

* Should they prove to be different species, new appellations must be given; and, as that of *Strix cunicularia* will, by right of priority, be exclusively retained for the Coquimbo Owl, we would propose for the present bird the name of *Strix hypugæa.*

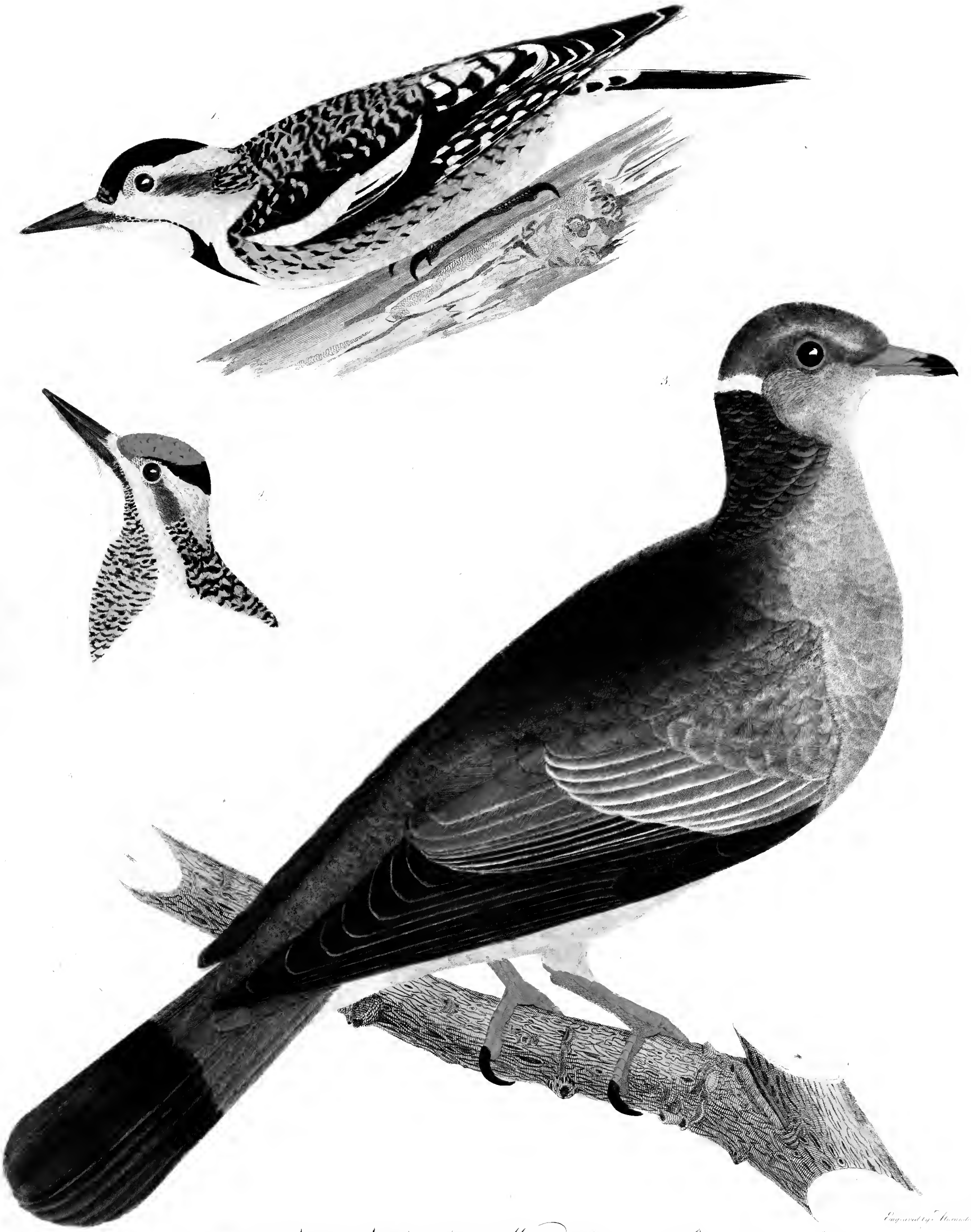
we cannot well understand why Vieillot did not thus exemplify so interesting a bird. Our figure will be the more acceptable to ornithologists, as it is the first which has been given of the Burrowing Owl: in the distance we have introduced a view of the Prairie Dog village.

The peculiar sub-genus of this bird has not hitherto been determined, owing to the neglect with which naturalists have treated the arrangement of extra-European Owls. Like all diurnal Owls, our bird belongs to the sub-genus *Noctua* of Savigny, having small oval openings to the ears, which are destitute of operculum, the facial disk of slender feathers small and incomplete, and the outer edges of the primaries not recurved; but it differs from them in not having the tarsus and toes covered by long thick feathers.

The Burrowing Owl is nine inches and a half long, and two feet in extent. The bill is horn colour, paler on the margin, and yellow on the ridges of both mandibles; the inferior mandible is strongly notched on each side: the capistrum before the eyes terminates in black rigid bristles, as long as the bill: the irides are bright yellow. The general colour of the plumage is a light burnt-umber, spotted with whitish, paler on the head and upper part of the neck; the lower part of the breast and belly are whitish, the feathers of the former being banded with brown: the inferior tail coverts are white immaculate. The wings are darker than the body, the feathers being much spotted and banded with whitish; the primaries are five or six banded, each band being more or less widely interrupted near the shaft, and margined with blackish, which colour predominates towards the tip; the extreme tip is dull whitish; the shafts are brown above, and white beneath: the exterior primary is finely serrated, and equal in length to the fifth, the second and fourth being hardly shorter than the third, which is the longest. The tail is very short, slightly rounded, having its feathers of the same colour as the primaries, and like them five or six banded, but more purely white at tip. The feet are dusky,

and remarkably granulated, extending, when stretched backwards, an inch and a half beyond the tail; the tarsi are slender, much elongated, covered before and on each side with loose webbed feathers, which are more thickly set near the base, and become less crowded towards the toes, where they assume the form of short bristles; those on the toes being altogether setaceous, and rather scattered. The lobes beneath the toes are large and much granulated; the nails are black and rather small, the posterior one having no groove beneath.

The individual we have described is a male, and no difference is observable in several other specimens: the female differs in nothing except that her eyes are of a pale yellow colour.



Drawn from Nature by Edwin R. Field

1. and 2. Young Yellow-bellied Woodpeckers. *Picus Varius.*

3. Band-tailed Pigeon. *Columba fasciata.*

Engraved by T. Woodcock

YOUNG YELLOW-BELLIED WOODPECKER.

PICUS VARIUS.

Plate VIII. Fig. 1, 2.

See Wilson's *American Ornithology*, I, p. 147, Pl. 9, fig. 2, for the adult, and history.

Picus varius, Linn. *Syst.* I, p. 176, Sp. 20. Gmel. *Syst.* I, p. 438, Sp. 20. Lath. *Ind.* p. 232, Sp. 21. Vieill. *Ois. de l'Am. Sept.* II, p. 63, Pl. 118, adult male; Pl. 119, very young.

Picus varius carolinensis, Briss. *Av.* IV, p. 62, Sp. 24.

Picus varius minor, ventre luteo, the Yellow-bellied Woodpecker, Catesby, *Carolina*, I, p. 21, Pl. 21, left figure, adult male. Bartr. *Trav.* p. 291.

Epeiche ou Pic. varié de la Caroline, Buff. *Ois.* VII, p. 77. *Pl. Enl.* 785, adult male.

Yellow-bellied Woodpecker, Penn. *Arct. Zool.* Sp. 166. Lath. *Syn.* I, p. 574, Sp. 20.

Philadelphia Museum, No. 2004, adult Male; No. 2005, adult Female.

My Collection, young and variety.

As Wilson's history of this well known Woodpecker is complete, and his description obviously discriminates the sexes and young, we shall refer the reader entirely to him for information on those points. The present bird is introduced on account of its anomalous plumage; for, although the colour of the head is but slightly advanced towards its red tint, having only two or three reddish points visible on the forehead, yet the patch on the breast is quite as obvious as it is found in the adult state. In young birds of the first and second years, this patch is usually obsolete, the breast being chiefly dusky-gray, although the crown is entirely red.

The specimen before us, possibly exhibiting one of the periodical states of plumage of this changeable bird, is the only one we have been able to procure, amongst a great number of the young of

both sexes in the ordinary dress. The well marked patch on the breast might induce the belief that this individual is an adult female, and that this sex, as several writers have erroneously remarked, is destitute of the red crown; but, in addition to the fact that our specimen proved, on dissection, to be a male, we obtained, almost every day during the month of November, young birds of both sexes, with the crown entirely red, or more or less sprinkled with that colour, the intermixture arising altogether from age or advanced plumage, and not from sex. We are unable to state, with any degree of certainty, at what period the bird assumes the plumage now represented; and we rather incline to the opinion that it is an accidental variety.

For the purpose of comparison, we have added, on the same plate, the most interesting portion of a young bird, as it usually appears in November of the first year; and though the sexes are then alike in plumage, we had the figure taken from a young male, in order to complete the iconography of that sex.

Vieillot's figure represents the young before the first moult, when, like our anomalous specimen, they have no red on the crown; differing, however, in not having the head of a glossy black, but of a dull yellowish-gray, and the patch on the breast also of a dull gray tint.

BAND-TAILED PIGEON.

COLUMBA FASCIATA.

Plate VIII. Fig. 3.

Columba fasciata, Say, *in Long's Expedition to the Rocky Mountains*, II, p. 10.

Philadelphia Museum, No. 4938.

This bird, which is a male, was shot in July, by Mr. Titian Peale, at a saline spring on a small tributary of the river Platte, within the first range of the Rocky Mountains; it was accompanied by another individual, probably its mate, which escaped. As no other specimens have been discovered, the reader will not be surprised that our specific description is unaccompanied by a general history of their manners.

The band-tailed Pigeon is thirteen inches long; the bill is yellow, black at tip, and somewhat gibbous behind the nostrils. The feet are yellow, and the nails black; the irides are blackish. The head is of a purplish-cinereous colour; the neck, at its junction with the head, has a white semi-band, beneath which its back and sides are brilliant golden-green, the feathers being brownish-purple at base; the under part of the neck is pale vinaceous-purplish, this colour becoming paler as it approaches the vent, which, together with the inferior tail coverts, is white. The anterior portion of the back, the wing coverts, and scapulars, are brownish-ash; the primaries are dark brown, edged with whitish on the exterior webs; the lower part of the back, the rump, tail coverts, inferior wing coverts, and sides, are bluish-ash, brighter beneath the wings. The shafts of the body feathers and tail coverts are remarkably robust, tapering rather suddenly near the tip. The tail, which consists of twelve

feathers, is slightly rounded at tip, with a definite blackish band at two-thirds the length from the base, visible on both sides; before this band the colour is bluish-ash, and behind dirty grayish: the tail is much lighter on the inferior surface.

This species is closely allied to *Columba caribæa* of Gmelin, with which Say stated its analogy, and also to *Columba leucocephala* of Linné. In fact, it possesses some characters in common with each of these species, such as the band on the tail of the former, and an indication of white on the head of the latter. This character may induce some naturalists to suppose it the young of the *leucocephala*, but by a careful comparison all doubt will be removed, and it will be admitted to the rank of a distinct species.

The *caribæa* may readily be distinguished from the present species by its superior size, and by being destitute of the white band on the neck; by having a reddish bill, tipped with yellow, and dark red feet. The *leucocephala*, in the adult state, has the whole head white above; but as it is destitute of this distinction when young, acquiring it gradually as it advances in age, other discriminating characters must be employed; the tail is without a band, the bill is red with a white tip, and the feet are red.

Drawn from Nature by Titian R. Peale

Engraved by A. Doolittle

Wild Turkey. Male and Female.

Meleagris Gallopavo.

WILD TURKEY.

MELEAGRIS GALLOPAVO.

Plate IX. Male and Female.

Meleagris gallopavo, Linn. *Syst.* I, p. 268, Sp. 1. Gmel. *Syst.* I, p. 732, Sp. 1. Lath. *Ind.* p. 618, Sp. 1. Temm. *Hist. Nat. des Pig. et Gall. Index*, III, p. 676. Wilson, *Am. Orn.* VI, Index, p. xvii. Stephens, *Cont. of* Shaw's, *Zool.* XI, Part I, p. 156, Pl. 8. Ranzani, *Elem. di Zool.* III, Part I, p. 154.

Meleagris sylvestris, Vieill. *Nouv. Dict. d'Hist. Nat.* IX, p. 447.

Gallopavo, Aldrovandi, *Orn.* II, p. 35, fig. on p. 39, domestic variety, male; fig. on p. 40, Id. female. Willugby, *Orn.* p. 113, Pl. 27, fig. 4, dom. var. male. Johnston, *Theatrum Universale de Avibus*, p. 55, Pl. 24, fig. 1, dom. var. male; fig. 2, Id. female. Briss. *Av.* I, p. 158, Pl. 16, dom. var. male.

Gallus indicus, Welscher Han, Johnston, *Th. Av.* p. 83, Pl. 29, fig. 1, dom. var. male.

Gallopavo sylvestris Novæ Angliæ, a New-England Wild Turkey, Ray, *Syn.* p. 51, Sp. 3.

Gallopavo sylvestris, Catesby, *Carolina*, I, *App.* p. xliv.

Meleagris americanus, the Wild Turkey, Bartr. *Trav.* p. 290.

Gallo Pavo, Gallo Pavone volgarmente Pollo d'India; Storia degli Uccelli, II, Pl. 222, dom. crested var. male; Pl. 223, dom. white, black-spotted var. young; Pl. 224, dom. white, yellowish-spotted var. young; Pl. 225, dom. black var. young; Pl. 226, dom. black, white-spotted var. young.

Coc. d'Inde, Belon, *Histoire de la Nature des Oiseaux*, p. 248, with fig. dom. var. male.

Dindon, Buff. *Ois.* II, p. 132, Pl. 3. *Pl. Enl.* 97, dom. whitish var. male. Temm. *Hist. Nat. des Pig. et Gall.* II, p. 374. Gerardin, *Tabl. Elem. d'Orn.* II, p. 103, Pl. 21, fig. 2, dom. var. male.

Turkie, Josselyn, *Voyages to New-England*, p. 99. *New-England's Rarities*, p. 8.

Wild Turkey, Clayton, *Virginia, Phil. Trans.* XVII, p. 992. *Id. Abridg.* III, p. 590. Lawson, *Carolina*, p. 149. Penn. *Phil. Trans.* LXXI, p. 67. *Arct. Zool.* Sp. 178.

American Turkey, Lath. *Syn.* II, Part II, p. 676, Sp. 1.

Domestic Turkey, Penn. *Brit. Zool.* I, Sp. 97.

The native country of the Wild Turkey extends from the North-western territory of the United States to the isthmus of Panama, south of which it is not to be found, notwithstanding the statements

of authors, who have mistaken the Curassow for it. In Canada, and the now densely peopled parts of the United States, Wild Turkeys were formerly very abundant; but, like the Indian and Buffalo, they have been compelled to yield to the destructive ingenuity of the white settlers, often wantonly exercised, and seek refuge in the remotest parts of the interior. Although they relinquish their native soil with slow and reluctant steps, yet such is the rapidity with which settlements are extended and condensed over the surface of this country, that we may anticipate a day, at no distant period, when the hunter will seek the Wild Turkey in vain.

We have neglected no means of obtaining information from various parts of the union, relative to this interesting bird; and having been assisted by the zeal and politeness of several individuals, who, in different degrees, have contributed to our stock of knowledge on this subject, we return them our best thanks. We have particular satisfaction in acknowledging the kindness of Mr. John J. Audubon, from whom we have received a copious narrative, containing a considerable portion of the valuable notes collected by him, on this bird, during twenty years that he has been engaged in studying Ornithology, in the only book free from error and contradiction, the great book of nature. His observations, principally made in Kentucky and Louisiana, proved the more interesting, as we had received no information from those states: we have, in consequence, been enabled to enrich the present article with several new details of the manners and habits of the Wild Turkey.

The wooded parts of Arkansaw, Louisiana, Tennessee, and Alabama; the unsettled portions of the states of Ohio, Kentucky, Indiana, and Illinois; the vast expanse of territory north-west of these states, on the Mississippi and Missouri, as far as the forests extend, are more abundantly supplied, than any other parts of the union, with this valuable game, which forms an important part of the subsistence of the hunter and traveller in the wilderness. It is not probable that the range of this bird extends to, or beyond,

the Rocky Mountains; the Mandan Indians, who a few years ago visited the city of Washington, considered the Turkey one of the greatest curiosities they had seen, and prepared a skin of one, to carry home for exhibition.

The Wild Turkey is not very plenty in Florida, Georgia, and the Carolinas; is still less frequently found in the western parts of Virginia and Pennsylvania; and is extremely rare, if indeed it exists at all, in the remaining northern and eastern parts of the United States: in New-England, it even appears to have been already destroyed one hundred and fifty years back. I am, however, credibly informed, that Wild Turkeys are yet to be found in the mountainous districts of Sussex county, New-Jersey. The most eastern part of Pennsylvania now inhabited by them, appears to be Lancaster county; and they are often observed in the oak woods near Philipsburg, Clearfield county. Those occasionally brought to the Philadelphia and New-York markets, are chiefly obtained in Pennsylvania and New-Jersey.

The Wild Turkeys do not confine themselves to any particular food; they eat maize, all sorts of berries, fruits, grasses, beetles; and even tadpoles, young frogs, and lizards, are occasionally found in their crops; but where the pecan nut is plenty, they prefer that fruit to any other nourishment: their more general predilection is, however, for the acorn, on which they rapidly fatten. When an unusually profuse crop of acorns is produced in a particular section of country, great numbers of Turkeys are enticed from their ordinary haunts in the surrounding districts. About the beginning of October, while the mast still remains on the trees, they assemble in flocks, and direct their course to the rich bottom lands. At this season, they are observed, in great numbers, on the Ohio and Mississippi. The time of this irruption is known to the Indians by the name of the *Turkey month.*

The males, usually termed *gobblers,* associate in parties numbering from ten to a hundred, and seek their food apart from the

females; whilst the latter either move about singly with their young, then nearly two-thirds grown, or, in company with other females and their families, form troops, sometimes consisting of seventy or eighty individuals, all of whom are intent on avoiding the old males, who, whenever opportunity offers, attack and destroy the young, by repeated blows on the skull. All parties, however, travel in the same direction, and on foot, unless they are compelled to seek their individual safety by flying from the hunter's dog, or their march is impeded by a large river. When about to cross a river, they select the highest eminences, that their flight may be the more certain; and here they sometimes remain for a day or more, as if for the purpose of consultation, or to be duly prepared for so hazardous a voyage. During this time the males *gobble* obstreperously, and strut with extraordinary importance, as if they would animate their companions, and inspire them with the utmost degree of hardihood: the females and young also assume much of the pompous air of the males, the former spreading their tails, and moving silently around. At length the assembled multitude mount to the tops of the highest trees, whence, at a signal note from a leader, the whole together wing their way towards the opposite shore. All the old and fat ones cross without difficulty, even when the river exceeds a mile in width; but the young, meagre, and weak, frequently fall short of the desired landing, and are forced to swim for their lives: this they do dexterously enough, spreading their tails for a support, closing their wings to the body, stretching the neck forwards, and striking out quickly and forcibly with their legs. If, in thus endeavouring to regain the land, they approach an elevated or inaccessible bank, their exertions are remitted, they resign themselves to the stream, for a short time, in order to gain strength, and then, with one violent effort, escape from the water. But in this attempt all are not successful; some of the weaker, as they cannot rise sufficiently high in air to clear the bank, fall again and again into the water, and thus miserably perish. Immediately

after these birds have succeeded in crossing a river, they for some time ramble about without any apparent unanimity of purpose, and a great many are destroyed by the hunters, although they are then least valuable.

When the Turkeys have arrived in their land of abundance, they disperse in small flocks, composed of individuals of all sexes and ages intermingled, who devour all the mast as they advance: this occurs about the middle of November. It has been observed, that, after these long journeys, the Turkeys become so familiar as to venture on the plantations, and even approach so near the farm-houses as to enter the stables and corn-cribs, in search of food: in this way they pass the autumn, and part of the winter. During this season great numbers are killed by the inhabitants, who preserve them in a frozen state, in order to transport them to a distant market.

Early in March they begin to pair; and, for a short time previous, the females separate from, and shun their mates, though the latter pertinaciously follow them, uttering their gobbling note. The sexes roost apart, but at no great distance, so that when the female utters a call, every male within hearing responds, rolling note after note, in the most rapid succession; not as when spreading the tail and strutting near the hen, but in a voice resembling that of the Tame Turkey, when he hears any unusual or frequently repeated noise. Where the Turkeys are numerous, the woods from one end to the other, sometimes for hundreds of miles, resound with this remarkable voice of their wooing, uttered responsively from their roosting places. This is continued for about an hour; and, on the rising of the sun, they silently descend from their perches, and the males begin to strut, for the purpose of winning the admiration of their mates.

If the call be given from the ground, the males in the vicinity fly towards the individual, and, whether they perceive her or not, erect and spread their tails, throw the head backwards, distend the comb

and wattles, strut pompously, and rustle their wings and body feathers, at the same moment ejecting a puff of air from the lungs. Whilst thus occupied, they occasionally halt to look out for the female, and then resume their strutting and puffing, moving with as much rapidity as the nature of their gait will admit. During this ceremonious approach the males often encounter each other, and desperate battles ensue, when the conflict is only terminated by the flight or death of the vanquished.

This pugnacious disposition is not to be regarded as accidental, but as resulting from a wise and excellent law of nature, who always studies the good of the species without regard to the individuals. Did not females prefer the most perfect of their species, and were not the favours of beauty most willingly dispensed to the victorious, feebleness and degeneracy would soon mark the animal creation: but, in consequence of this general rule, the various races of animals are propagated by those individuals who are not only most to be admired for external appearance, but most to be valued for their intrinsic spirit and energy.

When the object of his pursuit is discovered, if the female be more than one year old, she also struts and even gobbles, evincing much desire; she turns proudly round the strutting male, and suddenly opening her wings, throws herself towards him, as if to terminate his procrastination, and, laying herself on the earth, receives his dilatory caresses. But should he meet a young hen, his strut becomes different, and his movements are violently rapid; sometimes rising in air, he takes a short circular flight, and on alighting drags his wings for a distance of eight or ten paces, running at full speed, occasionally approaching the timorous hen, and pressing her until she yields to his solicitations. Thus are they mated for the season, though the male does not confine himself exclusively to one female, nor does he hesitate to bestow his attentions and endearments on several, whenever an opportunity offers.

One or more females, thus associated, follow their favourite, and

roost in his immediate neighbourhood, if not on the same tree, until they begin to lay, when they change their mode of life, in order to save their eggs, which the male uniformly breaks if in his power, that the female may not be withdrawn from the gratification of his desires. At this time the females shun the males during the greater part of the day: the latter become clumsy and careless, meet each other peacefully, and so entirely cease to gobble, that the hens are obliged to court their advances, calling loudly and almost continually for them. The female may then be observed caressing the male, and imitating his peculiar gestures, in order to excite his amorousness.

The cocks, even when on the roost, sometimes strut and gobble, but more generally merely elevate the tail, and utter the *puff*, on which the tail and other feathers suddenly subside. On light or moon-shining nights, near the termination of the breeding season, they repeat this action, at intervals of a few minutes, for several hours together, without rising from their perches.

The sexes then separate; the males, being much emaciated, cease entirely to gobble, retire and conceal themselves by prostrate trees, in secluded parts of the forest, or in the almost impenetrable privacy of a cane-brake. Rather than leave their hiding places, they suffer themselves to be approached within a short distance, when they seek safety in their speed of foot: at this season, however, they are of no value to the hunter, being meagre and covered with ticks. By thus retiring, using very little exercise, and feeding on peculiar grasses, they recover their flesh and strength, and when this object is attained, again congregate, and recommence their rambles.

About the middle of April, when the weather is dry, the female selects a proper place in which to deposit her eggs, secured from the encroachment of water, and, as far as possible, concealed from the watchful eye of the Crow: this crafty bird espies the hen going to her nest, and having discovered the precious deposit, waits for the absence of the parent, and removes every one of the eggs from

the spot, that he may devour them at leisure. The nest is placed on the ground, either on a dry ridge, in the fallen top of a dead leafy tree, under a thicket of sumach or briars, or by the side of a log; it is of a very simple structure, being composed of a few dried leaves. In this receptacle the eggs are deposited, sometimes to the number of twenty, but more usually from nine to fifteen; they are whitish, spotted with reddish-brown, like those of the domestic bird. Their manner of building, number of eggs, period of incubation, &c. appear to correspond throughout the Union, as I have received exactly similar accounts from the northern limits of the Turkey range, to the most southern regions of Florida, Louisiana, and the western wilds of Missouri.

The female always approaches her nest with great caution, varying her course so as rarely to reach it twice by the same route; and, on leaving her charge, she is very careful to cover the whole with dry leaves, with which she conceals it so artfully, as to make it extremely difficult, even for one who has watched her movements, to indicate the exact spot: hence few nests are found, and these are generally discovered by fortuitously starting the female from them, or by the appearance of broken shells, scattered around by some cunning Lynx, Fox, or Crow. When laying or sitting, the Turkey hen is not readily driven from her post by the approach of apparent danger; but if an enemy appears, she crouches as low as possible, and suffers it to pass. A circumstance related by Mr. Audubon, will show how much intelligence they display on such occasions: having discovered a sitting hen, he remarked that, by assuming a careless air, whistling, or talking to himself, he was permitted to pass within five or six feet of her; but, if he advanced cautiously, she would not suffer him to come within twenty paces, but ran off twenty or thirty yards with her tail expanded, when, assuming a stately gait, she paused on every step, occasionally uttering a chuck. They seldom abandon their nests on account of being discovered by man, but should a snake or any other animal

suck one of the eggs, the parent leaves them altogether. If the eggs be removed, she again seeks the male and recommences laying, though otherwise she lays but one nest of eggs during the season. Several Turkey hens sometimes associate, perhaps for mutual safety, deposit their eggs in the same nest, and rear their broods together. Mr. Audubon once found three females sitting on forty-two eggs. In such cases, the nest is constantly guarded by one of the parties, so that no Crow, Raven, nor even Polecat, dares approach it.

The mother will not forsake her eggs, when near hatching, while life remains; she will suffer an enclosure to be made around and imprison her, rather than abandon her charge. Mr. Audubon witnessed the hatching of a brood, while thus endeavouring to secure the young and mother. "I have laid flat," says he, "within a very few feet, and seen her gently rise from the eggs, look anxiously towards them, chuck with a sound peculiar to the mother on such an occasion, remove carefully each half empty shell, and with her bill caress and dry the younglings, that already stand tottering and attempting to force their way out of the nest."

When the process of incubation is ended, and the mother is about to retire from the nest with her young brood, she shakes herself violently, picks and adjusts the feathers about the belly, and assumes a different aspect; her eyes are alternately inclined obliquely upwards and sideways; she stretches forth her neck, in every direction, to discover birds of prey or other enemies; her wings are partially spread, and she softly clucks to keep her tender offspring close to her side. They proceed slowly, and, as the hatching generally occurs in the afternoon, they sometimes return to pass the first night in the nest. While very young, the mother leads them to elevated dry places, as if aware that humidity, during the first few days of their life, would be very dangerous to them, they having then no other protection than a delicate, soft, hairy

down. In very rainy seasons Wild Turkeys are scarce, because, when completely wetted, the young rarely survive.

At the expiration of about two weeks, the young leave the ground on which they had previously reposed at night under the female, and follow her to some low, large branch of a tree, where they nestle under the broadly curved wings of their vigilant and fostering parent. The time then approaches in which they seek the open ground or prairie land during the day, in search of strawberries, and subsequently of dewberries, blackberries, and grasshoppers, thus securing a plentiful food, and enjoying the influence of the genial sun. They frequently dust themselves in shallow cavities of the soil or on ant-hills, in order to clean off the loose skin of their growing feathers, and rid themselves of ticks and other vermin.

The young Turkeys now grow rapidly, and in the month of August, when several broods flock together, and are led by their mothers to the forest, they are stout and quite able to secure themselves from the unexpected attacks of Wolves, Foxes, Lynxes, and even Cougars, by rising quickly from the ground, aided by their strong legs, and reaching with ease the upper limbs of the tallest tree. Amongst the numerous enemies of the Wild Turkey, the most dreaded are the large diurnal and nocturnal birds of prey, and the Lynx (*Felis rufa*), who sucks their eggs, and is extremely expert at seizing both parent and young: he follows them for some distance, in order to ascertain their course, and then, making a rapid circular movement, places himself in ambush before them, and waits until, by a single bound, he can fasten on his victim.

The following circumstance is related by Bartram: "Having seen a flock of Turkeys at some distance, I approached them with great caution; when, singling out a large cock, and being just on the point of firing, I observed that several young cocks were affrighted, and in their language warned the rest to be on their guard against

an enemy, whom I plainly perceived was industriously making his subtile approaches towards them, behind the fallen trunk of a tree, about twenty yards from me. This cunning fellow-hunter was a large fat Wild Cat, or Lynx; he saw me, and at times seemed to watch my motions, as if determined to seize the delicious prey before me; upon which I changed my object, and levelled my piece at him. At that instant my companion, at a distance, also discharged his piece, the report of which alarmed the flock of Turkeys, and my fellow-hunter, the Cat, sprang over the log, and trotted off."

These birds are guardians of each other, and the first who sees a Hawk or Eagle gives a note of alarm, on which all within hearing lie close to the ground. As they usually roost in flocks, perched on the naked branches of trees, they are easily discovered by the large Owls, and, when attacked by these prowling birds, often escape by a somewhat remarkable manœuvre. The Owl sails around the spot to select his prey; but, notwithstanding the almost inaudible action of his pinions, the quick ear of one of the slumberers perceives the danger, which is immediately announced to the whole party by a *chuck;* thus alarmed, they rise on their legs, and watch the motions of the Owl, who, darting like an arrow, would inevitably secure the individual at which he aimed, did not the latter suddenly drop his head, squat, and spread his tail over his back; the Owl then glances over without inflicting any injury, at the very instant that the Turkey suffers himself to fall headlong towards the earth, where he is secure from his dreaded enemy.

On hearing the slightest noise, Wild Turkeys conceal themselves in the grass, or among shrubs, and thus frequently escape the hunter, or the sharp-sighted birds of prey. The sportsman is unable to find them during the day, unless he has a dog trained for the purpose; it is necessary to shoot them at a very short distance, since, when only wounded, they quickly disappear, and, accelerating their motion by a sort of half flight, run with so much speed, that

the swiftest hunter cannot overtake them. The traveller, driving rapidly down the declivity of one of the Alleghanies, may sometimes see several of them before him, that evince no urgent desire to get out of the road; but, on alighting, in hopes of shooting them, he soon finds that all pursuit is vain.

In the spring, when the males are much emaciated by their attendance on the females, it sometimes may happen that, in cleared countries, they can be overtaken by a swift cur-dog, when they will squat, and suffer themselves to be caught by the dog, or hunter who follows on horseback. But from the knowledge we have gained of this bird, we do not hesitate to affirm, that the manner of running down Turkeys, like Hares or Foxes, so much talked of, is a mere fable, as such a sport would be attended with very trifling success. A Turkey hound will sometimes lead his master several miles, before he can a second time *flush* the same individual from his concealment; and even on a fleet horse, after following one for hours, it is often found impossible to *put it up*. During a fall of melting snow, Turkeys will travel extraordinary distances, and are often pursued in vain by any description of hunters; they have then a long, straddling manner of running, very easy to themselves, but which few animals can equal. This disposition for running, during rains, or humid weather, is common to all gallinaceous birds.

The males are frequently decoyed within gunshot, in the breeding season, by forcibly drawing the air through one of the wing bones of the Turkey, producing a sound very similar to the voice of the female: but the performer on this simple instrument must commit no error, for Turkeys are quick of hearing, and, when frequently alarmed, are wary and cunning. Some of these will answer to the call without advancing a step, and thus defeat the speculations of the hunter, who must avoid making any movement, inasmuch as a single glance of a Turkey may defeat his hopes of decoying them. By imitating the cry of the Barred Owl, (*Strix nebulosa*,) the hunter discovers many on their roosts, as they will reply by a

gobble to every repetition of this sound, and can thus be approached with certainty, about daylight, and easily killed.

Wild Turkeys are very tenacious of their feeding grounds, as well as of the trees on which they have once roosted. Flocks have been known to resort to one spot for a succession of years, and to return after a distant emigration in search of food. Their roosting place is mostly on a point of land jutting into a river, where there are large trees. When they have collected at the signal of a repeated gobbling, they silently proceed towards their nocturnal abodes, and perch near each other: from the numbers sometimes congregated in one place, it would seem to be the common rendezvous of the whole neighbourhood. But no position, however secluded or difficult of access, can secure them from the attacks of the artful and vigilant hunter, who, when they are all quietly perched for the night, takes a stand previously chosen by daylight; and, when the rising moon enables him to take sure aim, shoots them down at leisure, and, by carefully singling out those on the lower branches first, he may secure nearly the whole flock, neither the presence of the hunter, nor the report of his gun, intimidating the Turkeys, although the appearance of a single Owl would be sufficient to alarm the whole troop: the dropping of their companions from their sides excites nothing but a buzzing noise, which seems more expressive of surprise than fright. This fancied security, or heedlessness of danger, while at roost, is characteristic of all the gallinaceous birds of North America.

The more common mode of taking Turkeys is by means of *pens*, constructed with logs, covered in at top, and with a passage in the earth under one side of it, just large enough to admit an individual when stooping. The ground chosen for this purpose is generally sloping, and the passage is cut on the lower side, widening outwards. These preparations being completed, Indian corn is strewed for some distance around the pen, to entice the flock, which, picking up the grain, is gradually led towards the passage,

and thence into the enclosure, where a sufficient quantity of corn is spread to occupy the leader until the greater part of the Turkeys have entered. When they raise their heads and discover that they are prisoners, all their exertions to escape are directed upwards and against the sides of the pen, not having sagacity enough to stoop sufficiently low to pass out by the way they entered; and thus they become an easy prey, not only to the experienced hunter, but even to the boys on the frontier settlements.

In proportion to the abundance or scarcity of food, and its good or bad quality, they are small or large, meagre or fat, and of an excellent or indifferent flavour: in general, however, their flesh is more delicate, more succulent, and better tasted, than that of the Tame Turkey: they are in the best order late in the autumn, or in the beginning of winter. The Indians value this food so highly, when roasted, that they call it "the white man's dish," and present it to strangers as the best they can offer. It seems probable, that in Mexico the Wild Turkey cannot obtain such substantial food as in the United States, since Hernandez informs us that their flesh is harder, and, in all respects, inferior to that of the domestic bird.

The Indians make much use of their tails as fans; the women weave their feathers with much art, on a loose web made of the rind of the Birch tree, arranging them so as to keep the down on the inside, and exhibit the brilliant surface to the eye. A specimen of this cloth is in the Philadelphia Museum; it was found enveloping the body of an Indian female, in the great Saltpetre cave of Kentucky.

Among the benefits conferred by America on the rest of the world, the gift of this noble bird should occupy a distinguished place, as unquestionably one of the most useful of the feathered tribe, being capable of ministering largely to the sustenance and comfort of the human race. Though the Turkey is surpassed in external beauty by the magnificent Peacock, its flesh is greatly superior in excellence, standing almost unrivalled for delicacy of

texture and agreeable sapidity. On this account, it has been eagerly sought by almost all nations, and has been naturalized with astonishing rapidity throughout the world, almost universally constituting a favourite banquet dish.

The Turkey, belonging originally to the American continent, was necessarily unknown to the ancients, who, in this as in a thousand other instances, were deficient in our most common and essential articles of food. Readers unacquainted with the fact may well be surprised to learn, that, although the introduction of this bird into Europe is comparatively modern, its origin has already been lost sight of, and that eminent naturalists of the last century, who lived so much nearer to the time of its first appearance, have expressed great uncertainty concerning its native country. Thus Belon, Aldrovandi, Gessner, Ray, &c. thought that it came originally from Africa and the East Indies, and endeavoured to recognise it in some of the domestic birds of the ancients. Belon and Aldrovandi supposed it to have been mentioned by ancient authors, but they mistook for it the *Numida meleagris* of Linné, which is actually an African bird, now almost naturalized in America, even in a wild state; so that it would be apparently more reasonable for America to regard that bird as indigenous, than that the old continent should lay claim to the Turkey. In so soon losing sight of the origin of this bird, we see a strong exemplification of the ungrateful disposition of man, who can durably treasure up the memory of wrongs and injuries, but fails to recollect the greatest benefits he has received. It would be loss of time to combat the arguments advanced by authors, who have deceived themselves, in attempting to deprive America of her just title to this bird, since they have been fully refuted by the eloquent Buffon; but we may here introduce a sketch of its progress from America throughout Europe.

The first unquestionable description of the Turkey was written by Oviedo, in 1525, in the summary of his History of the Indies.

This bird was sent from Mexico to Spain early in the sixteenth century; from Spain it was introduced into England in 1524. Turkeys were taken to France in the reign of Francis the First, whence they spread into Germany, Italy, &c.; a few, however, had been carried to the latter country, by the Spaniards, some years previously. The first Turkey eaten in France, appears to have been served up at the wedding banquet of Charles the Ninth, in the year 1570. Since that period, they have been bred with so much care, that in England, as we read in ancient chronicles, their rapid increase rendered them attainable at country feasts, where they were a much esteemed dish, as early as 1585. Europeans conveyed them to all their colonies, and thus were they gradually introduced into Asia, Africa, and even Oceanica.

The French distinguished them by the name of *Coq et Poule d'Inde*, (Cock and Hen from India,) because they were natives of the West Indies; subsequently, for the sake of brevity, they called them *Dindon*, an appellation which is yet retained. The English name is still worse, as it conveys the false idea that the Turkey originated in Asia, owing to the ridiculous habit, formerly prevalent, of calling every foreign object by the name of Turk, Indian, &c.

Although the Turkey is generally considered a stupid bird, it is probable that his intellectual qualifications have not been fairly appreciated, as he is susceptible of very lively emotions. If any new and remarkable object attracts the attention of the male, his whole appearance and demeanour undergo a sudden and extraordinary change: relinquishing his peaceful aspect, he boldly raises himself, his head and neck become turgid, and the wattles, from an influx of blood, glow with vivid red; he bristles up the feathers of the neck and back, his tail is vertically raised and expanded like a fan, and the wing feathers are extended until they touch the ground. Thus transformed, he utters a low, humming sound, and advances with a grave and haughty strut, occasionally accelerating his steps, and, at the same time, rubbing the tips of the primary feathers

violently against the earth. During these manœuvres, he now and then utters a harsh, interrupted, and dissonant note, apparently expressive of the highest degree of rage: this cry, sounding like *rook, oorook, oorook,* will be repeated at the pleasure of any person who should whistle, or strike the ear of the bird by any other acute or unusual sound. The appearance of any red cloth is sure to awaken his anger, and induce him to rush fearlessly on the disagreeable object, exerting all his power to injure or destroy it.

In connexion with the peculiar character of this bird, we may advantageously quote the sentiments of the great Franklin, who expressed a regret that the Turkey should not have been preferred to the Bald Eagle as an emblem of the United States. Certainly this Eagle is a tyrannical and pusillanimous bird, by no means an appropriate representative of a great and magnanimous nation, as was the Eagle chosen by the Romans.

"Others object to the Bald Eagle," says Franklin, in one of his letters, "as looking too much like a *Dindon,* or Turkey. For my own part, I wish the Bald Eagle had not been chosen as the representative of our country; he is a bird of bad moral character; he does not get his living honestly; you may have seen him perched on some dead tree, where, too lazy to fish for himself, he watches the labour of the Fishing Hawk; and when that diligent bird has at length taken a fish, and is bearing it to his nest for the support of his mate and young ones, the Bald Eagle pursues him, and takes it from him. With all this injustice he is never in good case, but, like those among men who live by sharping and robbing, he is generally poor, and often very lousy. Besides, he is a rank coward; the little Kingbird, not bigger than a Sparrow, attacks him boldly, and drives him out of the district. He is, therefore, by no means a proper emblem for the brave and honest Cincinnati of America, who have driven all the *Kingbirds* from our country; though exactly fit for that order of knights which the French call *Chevaliers d'Industrie.* I am, on this account, not displeased that

the figure is not known as a Bald Eagle, but looks more like a Turkey. For in truth the Turkey is, in comparison, a much more respectable bird, and withal a true original native of America. Eagles have been found in all countries, but the Turkey was peculiar to ours. He is, besides, (though a little vain and silly, 'tis true, but not the worse emblem for that,) a bird of courage, and would not hesitate to attack a grenadier of the British guards, who should presume to invade his farm-yard with a red coat on."

But, since the choleric temper and vanity of the Tame Turkey are proverbial in various languages, in some of which its very name is opprobrious, and often applied in derision to vainglorious and stupid people, we are better satisfied that its effigy was not placed in the escutcheon of the United States.

Those who have not observed the Turkey in its wild state, have only seen its deteriorated progeny, which are greatly inferior in size and beauty. So far from having gained by the care of man, and the abundance of food accessible in its state of domestication, this bird has degenerated not only in Europe and Asia, but, what is certainly extraordinary, even in its native country. The domesticated Turkey of America, accustomed as it is to roam in the woods and open fields almost without restraint, is in no respect superior to that of the European poultry-yard. I have, however, seen several very beautiful ones from Lancaster county, Pennsylvania, and Sussex county, New-Jersey, that were said to be a cross-breed between the wild cock and tame hen. This crossing often occurs in countries where Wild and Tame Turkeys are found; it is well known that they will readily approach each other; and such is the influence of slavery even upon the Turkey, that the robust inhabitant of the forest will drive his degenerate kinsfolk from their own food, and from their females, being generally welcomed by the latter and by their owners, who well know the advantages of such a connexion. The produce of this commixture is much esteemed by epicures, uniting the luscious obesity of the one, with the wild

flavour of the other. A gentleman, residing in Westchester county, New-York, a few years since procured a young female Wild Turkey, in order to make the experiment of crossing the breed; but, owing to some circumstance, it did not succeed, and in the ensuing spring this female disappeared. In the following autumn she returned, followed by a large brood; these were quite shy, but, by a little management, they were secured in a coop, and the mother allowed her liberty: she remained on the farm until the succeeding spring, when she again disappeared, and returned in autumn with another brood. This course she has repeated for several successive years.

Eggs of the Wild Turkey have been frequently taken from their nests and hatched under the tame hen; the young preserve a portion of their uncivilized nature, and exhibit some knowledge of the difference between themselves and their foster-mother, roosting apart from the tame ones, and in other respects showing the force of hereditary disposition. The domesticated young, reared from the eggs of the Wild Turkey, are often employed as decoy-birds to those in a state of nature. Mr. William Bloom, of Clearfield, Pennsylvania, caught five or six Wild Turkeys, when quite chickens, and succeeded in rearing them. Although sufficiently tame to feed with his Tame Turkeys, and generally associate with them, yet they always retained some of their original propensities, roosting by themselves, and higher than the tame birds, generally on the top of some tree, or of the house. They were also more readily alarmed; on the approach of a dog they would fly off, and seek safety in the nearest woods. On an occasion of this kind, one of them flew across the Susquehanna, and the owner was apprehensive of losing it; in order to recover it, he sent a boy with a Tame Turkey, which was released at the place where the fugitive had alighted. This plan was successful; they soon joined company, and the tame bird induced his companion to return home. Mr. Bloom remarked, that the Wild Turkey will thrive more, and

keep in better condition, than the Tame, on the same quantity of food.

Besides the above mentioned half breed, some domesticated Turkeys, of a very superior metallic tint, are sold in the Philadelphia and New-York markets as wild ones. Many of these require a practiced eye to distinguish their true character, but they are always rather less brilliant, and those I examined had a broad whitish band at the tip of the tail coverts, and another at the tip of the tail itself, which instantly betrayed their origin, the wild ones being entirely destitute of the former, and the band on the tip of the tail being neither so wide nor so pure.

In the following description we give the generic as well as the specific characters of the Wild Turkey, in order to make it complete.

The male Wild Turkey, when full grown, is nearly four feet in length, and more than five in extent. The bill is short and robust, measuring two inches and a half to the corner of the mouth; it is reddish, and horn colour at tip; the superior mandible is vaulted, declining at tip, and overhangs the inferior, being longer and wider; it is covered at base by a naked cere-like membrane, in which the nostrils are situated, they being half closed by a turgid membrane, and opening downwards; the inferior mandible slightly ascends towards the tip: the aperture of the ear is defended by a fascicle of small, decomposed feathers; the tongue is fleshy and entire; the irides are dark brown. The head, which is very small in proportion to the body, and half of the neck, are covered by a naked bluish skin, on which are a number of red wart-like elevations on the superior portion, and whitish ones on the inferior, interspersed with a few scattered, black, bristly hairs, and small feathers, which are still less numerous on the neck; the naked skin extends farther downwards on the inferior surface of the neck, where it is flaccid and membranous, forming an undulating appendage, on the lower part of which are cavernous elevations or *wattles*. A wrinkled, fleshy, conic, extensible caruncle, hairy and penicellated at tip,

arises from the bill at its junction with the forehead; when the bird is quiescent, this process is not much more than an inch and a half long; but when he is excited by love or rage, it becomes elongated, so as to cover the bill entirely, and depend two or three inches below it. The neck is of a moderate length and thickness, bearing on its inferior portion a pendent fascicle of black, rigid hairs, about nine inches long. The body is thick, somewhat elongated, and covered with long, truncated feathers; these are divided into very light fuliginous down at base, beyond which they are dusky; to this dusky portion succeeds a broad, effulgent, metallic band, changing now to copper colour or bronze-gold, then to violet or purple, according to the incidence of light, and at tip is a terminal, narrow, velvet-black band, which does not exist in the feathers of the neck and breast; the lower portion of the back, and the upper part of the rump are much darker, with less brilliant golden-violaceous reflections; the feathers of the inferior part of the rump have several concealed, narrow, ferruginous, transverse lines, then a black band before the broad metallic space, which is effulgent coppery; beyond the terminal narrow black band is an unpolished bright bay fringe. The upper tail coverts are of a bright bay colour, with numerous narrow bars of shining greenish; all these coverts are destitute of the metallic band, and the greater number have not the black subterminal one; the vent and thighs are plain brownish-cinereous, intermixed with paler; the under tail coverts are blackish, glossed with coppery towards the tip, and at tip are bright bay.

The wings are concave and rounded, hardly surpassing the origin of the tail; they have twenty-eight quill feathers, of which the first is shortest, and the fourth and fifth longest, the second and ninth being nearly equal; the smaller and middling wing coverts are coloured like the feathers of the body; the greater coverts are copper-violaceous, having a black band near the whitish tip; their concealed web is blackish, sprinkled with dull ferruginous: in old

birds the exterior web is much worn by friction amongst the bushes, in consequence of which those feathers exhibit a very singular unwebbed, curved appearance, faithfully represented in the plate. The spurious wing, the primary coverts, and the primaries, are plain blackish, banded with white, which is interrupted by the shaft, and sprinkled with blackish; the secondaries have the white portion so large, that they may as well be described as white, banded with blackish, and are moreover tinged with ferruginous-yellow; this colour gradually encroaches on the white, and then on the blackish, in proportion as the feathers approach the body, so that the tertials, are almost entirely of that colour, being only sprinkled with blackish, and having metallic reflections on the inner web; the anterior under wing coverts are brownish-black, the posterior ones being gray. The tail measures more than a foot and a quarter, is rounded, and composed of eighteen wide feathers; it is capable of being expanded and elevated, together with the superior tail coverts, so as to resemble a fan, when the bird parades, struts, or wheels. The tail is ferruginous, mottled with black, and crossed by numerous narrow, undulated lines, of the same colour, which become confused on the middle feathers; near the tip is a broad black band, then the feathers are again mottled for a short distance, and are widely tipped with ferruginous-yellow.

The feet are robust and somewhat elongated; the tarsus measures more than six inches in length, being covered before by large alternate pentagonal plates, and furnished, on the inner posterior side, with a rather obtuse, robust, compressed spur, nearly one inch long. The toes are three before, connected at base by a membrane, and one behind, touching the ground only at tip, being articulated higher on the tarsus than the others, and one half shorter than the lateral toes, which are equal; the middle toe is more than four inches long, and the posterior but little more than one inch; they are all covered by entire plates; the sole is granulated: the colour of the feet is red, the margins of the plates and scales, the mem-

brane and nails being blackish; the nails are oblong, wide, obtuse at tip, rounded above, and perfectly plane beneath.

The female, or hen Turkey, is considerably smaller in size, being three feet and a quarter long. The bill and feet resemble those of the male, but are proportionally smaller, the latter being destitute of even a rudiment of spur: the irides are like those of the male. The head and neck are not so naked as in that sex, but are covered by small, decomposed feathers, of a dirty grayish colour; those of the back of the neck are tipped with ferruginous, constituting a longitudinal vitta on that part; the caruncle on the frontlet is rudimental, not susceptible of being elongated; the pectoral appendage is entirely wanting in our specimen. The general plumage is dusky-gray, each feather having a metallic band, less brilliant than that of the male, then a blackish band, and a grayish terminal fringe; the black subterminal band is obsolete on the feathers of the neck, and of the whole inferior surface; those of the latter part, with the feathers of the lower portion of the back, of the rump, and the flanks, have their tips yellowish-ferruginous, becoming gradually brighter towards the tail. The vent and thighs are dirty yellowish-gray, without any reflections; the under tail coverts are tipped, and varied with rather deep ferruginous; the superior tail coverts are like those of the male, but duller, and tipped with a broad, whitish-ferruginous fringe. The wings are also duller, each covert being tipped with grayish; less white exists on the primaries, the bands being narrower, and the secondaries entirely destitute of them. The tail is similar in colour to that of the male. It is proper to remark, that the female which furnished the above description, and is figured in the plate, though certainly adult, had not attained to its full size and perfect beauty. It was procured in the month of March, on St. John's river, Florida.

The young of both sexes resemble each other so closely, before the naked membrane acquires its tinge of red, as to be scarcely distinguishable; the females, however, when a few days old, are

somewhat larger than the males, and have a weaker piping note; the males then begin to stand higher on their legs, which are stronger than those of the females, and soon exhibit the rudiments of spurs. On the approach of the first winter, the young males show a rudiment of the beard or fascicle of hairs on the breast, consisting of a mere tubercle, and attempt to strut and gobble; the second year the hairy tuft is about three inches long; in the third the Turkey attains its full stature, although it certainly increases in size and beauty for several years longer. In a fine male specimen, evidently young, which I obtained in the Philadelphia market, the plumage is equally brilliant with that of the finest adult, although the frontal caruncle is only one inch in length, the pectoral appendage two inches, and the spur merely rudimental. The concealed portion of the plumage on the anterior part of the back is sprinkled with pale ferruginous, which disappears as the bird advances in age.

Females of four years old have their full size and colouring; they then possess the pectoral fascicle, four or five inches long, (which, according to Mr. Audubon, they exhibit a little in the second year, if not barren,) but this fascicle is much thinner than that of the male. The barren hens do not obtain this distinction until a very advanced age; and, being preferable for the table, the hunters single them from the flock, and kill them in preference to the others. The female Wild Turkey is more frequently furnished with the hairy tuft than the Tame one, and this appendage is gained earlier in life. The great number of young hens without it, has no doubt given rise to the incorrect assertion of a few writers, that the female is always destitute of it.

The weight of the hen generally averages about nine pounds avoirdupois. Mr. Audubon has shot barren hens, in strawberry time, weighing thirteen pounds; and he has seen some few so fat as to burst open by falling from a tree, after being shot. The male Turkeys differ more in bulk and weight: from the accounts I have received from various parts of the Union, fifteen or twenty pounds

may be considered a fair statement of their medium weight; but birds of thirty pounds are not very rare; and I have ascertained the existence of some weighing forty. In relation to those surpassing the last mentioned weight, according to the report of authors who do not speak from personal observation, I have not been able to find any, and am inclined to consider them as fabulous. Mr. Audubon informs us, he saw one in the Louisville market that weighed thirty-six pounds; the pectoral appendage of this bird measured more than a foot in length. Bartram describes a specimen of remarkable size and beauty, reared from an egg found in the forest, and hatched by a common hen: when this Turkey stood erect, the head was three feet from the ground. The animal was stately and handsome, and did not seem insensible of the admiration he excited.

Our plate, which is the first that has been given of the Wild Turkey, represents both sexes, reduced to one-third of their natural size; the male was selected from among many fine specimens, shot in the month of April, near Engineer Cantonment, on the Missouri. It weighed twenty-two pounds; but, as the males are very thin at that season,* when in good order it must have weighed much more.

Though comparatively recent, the domestic state of the Turkey has been productive of many varieties; we need not, therefore, be surprised at the existence of numerous and remarkable differences in those animals which have been domesticated from time immemorial. The most striking aberration from the standard of the species, is certainly the tufted Turkey, which is very rare, the crest being white in some specimens, and black in others. Tame Turkeys sometimes occur of an immaculate black colour; others are exclusively white; some are speckled or variegated; and all these varieties are continued by propagation, under analogous circum-

* The extraordinary leanness of this bird, at particular seasons of the year, has become proverbial in many Indian languages. An *Omawhaw*, who wishes to make known his abject poverty, says, "*Wah pawne zezecah ha go ba;*" I am as poor as a Turkey in summer.

stances. In the wild state, a white, or even a speckled Turkey, is unknown; and we may venture to say, that a plain black one has hardly ever occurred.

Moehring proposed the name of *Cynchramus* for this genus, as the term *Meleagris* was used by the ancients to indicate a different bird: all other naturalists have agreed with Linné, who, though fully aware of the fact, made use of the name we have adopted. But he included in the genus two allied species, which Gmelin very properly rejected, and placed in a separate genus, which he called *Penelope*, considering the Turkey as *sui generis*. Latham again rendered the genus unnatural, by restoring one of the objectionable Linnean species, perceiving that it was not properly placed in *Penelope;* it is, in truth, a *Phasianus*. As now characterized, the present genus is exclusively American; and, by the discovery of a beautiful species closely allied to that of the United States, it now consists of two species. The Ocellated Turkey (*Meleagris oculata*) inhabits Honduras, and may be distinguished from the common species by its smaller size, more brilliant plumage, and principally by having ocellated spots on the tail. It was first described by Cuvier, and has lately been figured in that magnificent periodical work, the "Planches Coloriées" of Temminck and Laugier. A beautiful specimen has long been exhibited in the Charleston Museum.

Mr. Duponceau, so well known by his philological researches, has favoured us with the following table of names for the Wild Turkey, in the different Indian languages.

E. English Pronunciation.—F. French.—S. Spanish.—G. German.

Algonkin	Mississay, E.	Mackenzie.
Adayes	Owachuk, S.	MS. Voc.
Atacapas	Skillig, S.	MS. Voc.
Caddoes	Noe, E.	Dr. Sibley.
Chetimachas	Tsante hatineche hase, S.	MS. Voc.
Cherokee	Kainna; Oocoocoo, E.	MS. Voc.
Chickasaws	Fukit, E.	MS. Voc.
Choctaws	Oopuh, E.	MS. Voc.
Creeks	Pinewau, E.	MS. Voc.
Delaware proper	Tschíkenum, G.	Heckewelder and Zeisberger.
Delaware of New-Jersey	Tshikuuna, E.	MS. Voc.
Delaware of New-Sweden	Sickenem, (Swedish.)	Luther's Catechism.
Huron	Ondetontak, F.	Père Sagard.
Wyandot (same people)	Daigh-ton-tah, E.	Attwater in Archæol. Amer.
Illinois	Pireouah, F.	MS. Voc.
Knisteneaux	Mes-sey-thew, E.	Mackenzie.
Miamis	Pilauoh	MS. Voc.
Nenticoke	Pahquun, E.	MS. Voc.
Nottoway*	Kunum, E.	MS. Voc.
Omawhaw (a branch of Sioux)	Ze-ze-kah, E.	Say.
Onondagos (Iroquois)	Netachróchwa gatschínak, G.	Zeisberger's Dictionary, MS.
Osage cock	Sukah tingah, E.	MS. Voc.
Osage hen	Inchuga Sukah, E.	MS. Voc.
Ottos or Wahtoktatah (Sioux)	Wa-ek-kung-ja, E.	Say.
Shawanese	Peléwa, G.	Heckewelder.
Uchee†	Witch-pshah, E.	MS. Voc.
Unquachog (Long Island)	Nahiam, E.	MS. Voc.

* Indians of Virginia, a branch of the Tuscaroras.

† *Uchees*, a nation of Florida Indians, speaking a curious language, full of particular sounds, not found in any other languages; they live among the Creeks.

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